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MONOGRAPHS ON
ECONOMIC TOPICS

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of New Jersey

W. C. GARRISON
CHIEF OF BUREAU

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THEORY OF THE
ECONOMIC GROWTH

W. T. GARRISON
1847

THE SOCIAL ASPECT OF CHILD LABOR IN NEW JERSEY. 1903.

Public attention has been almost constantly fixed on the child labor question through agitation of the subject by some of the labor unions, carried on with scarcely any intermission for years back.

In the South Jersey glass districts it has been the theme of bitter complaint on the part of the glass workers' unions against certain employers in that industry who persist in running open shops.

In the middle counties of the State, where the largest manufacturing industries are carried on, the agitation of the subject has been almost as constant and intense. Scarce a meeting of a labor organization is held without some time being given to ventilating the child labor grievance and denouncing either the insufficiency or the non-enforcement of the laws against it.

Numbers of benevolent women, assuming the absolute truth of all that has been charged, have organized themselves into societies to fight the system and expose its iniquities. Certain newspapers given to sensationalism have taken up and given wide publicity to stories, often from irresponsible sources, of overworked children of tender ages toiling in factories at tasks far beyond the strength of their years.

Factory owners are represented as so many modern "Molochs," who are growing rich on the labor of infants. The term "child labor" has given place to "child slavery" in the vocabulary of denunciation, the latter phrase being more expressive of the hopeless and unhappy lot to which the little ones who must earn a living are said to be condemned. The emotions and sympathies of the people, ever ready to respond to such a call, are appealed to on their behalf as helpless victims of avarice on the part of employers or parents, the blame and resentment being most generally directed against the former.

In attempting to deal with the subject facts and reason are liable

to be lost sight of in an atmosphere of sentimentalism, the extent of the evil, if there is one, is grossly magnified, and the points of view from which the work of children might be justified as necessary, unavoidable, and unobjectionable, are almost totally ignored.

The reputation of the State cannot but suffer, although it may not be intended to accuse the public of being indifferent to the wrongs alleged, or as in any way conniving at the maintenance or extension of the system out of which they are said to grow. But the sweeping terms in which the employment of children is usually denounced, and the constant reiteration of charges of abuse may well leave an impression on the minds of those unacquainted with the subject that New Jersey's great manufacturing industries are largely dependent for their prosperity on child labor.

That children are employed in factories here as they are in other manufacturing States goes without saying, but that the number is much greater here than elsewhere, or is, in fact, large enough to form a conspicuous element in the factory population and a menace to the interests of adult labor is not correct, as the following table, which gives the number of children under sixteen years of age employed in manufacturing industry in the principal industrial States, will show.

The figures are taken from the United States census of 1900, and are, it should be remembered, for children under sixteen, while the lowest ages at which boys and girls have hitherto been allowed by New Jersey law to work in factories and workshops are twelve and fourteen years, respectively.

On September first, 1903, the factory age for children in this State will be fourteen years for both sexes, or two years under the age used in the census classification, which is as follows:

Manufacturing States.	Total number of wage earners employed in manufacturing industry.	Children under sixteen years.	
		Number.	Percentage.
New Jersey.....	241,582	8,042	3.3
New York.....	849,056	13,189	1.6
Pennsylvania	733,834	33,135	4.5
Illinois	395,110	10,419	2.6
Ohio	345,869	4,369	1.3
Massachusetts	497,448	12,556	2.5
Connecticut	176,694	3,479	1.9
Rhode Island	98,813	5,036	5.1

The position of New Jersey, as shown in the above table, does not differ materially from that of the other States named. Its proportion of child labor exceeds some, and is in turn exceeded by others, but in none of them are the figures larger than might reasonably be expected, and it probably would be safe to say that the number is much below what many familiar with current assertions on the subject have hitherto believed it to be.

A comparison of the number of children employed in 1890 and 1900 shows that in the former year the proportion was 2.8 per cent., the classification including boys under sixteen and girls under fifteen years of age; in 1900 under a classification of sixteen years for children of both sexes, the proportion is 3.3 per cent.; an increase in ten years of only one-half of one per cent. But the difference would, undoubtedly, be more than wiped out had the ages from which the count was made been the same for both census periods. When it is considered that during the ten years between 1890 and 1900 the industries of New Jersey had grown to such an unparelled extent that their products were 72.5 per cent. greater in value for the later than the earlier year, an increase which is almost double that of any other State, the small figure made by children in the labor force employed is certainly very gratifying. Undoubtedly there are among the upwards of eight thousand children now employed in the factories and workshops of the State many who are not in them through necessity, but have been set to work by parents who have a defective sense of obligation to their offspring, and think only of realizing something from their labor at as early an age as possible. Opportunities for placing such children in factories are always to be found through a certain class of employers, who think only of obtaining the cheapest kind of labor so as to increase profits.

Children of this class however, there is good reason for believing, are small in number compared with those who must work to maintain themselves and help other dependent members of their families. Children bereft of support through the death or long continued illness of fathers have to take up the burden the parent is no longer able to carry, and become, with the mothers, breadwinners for sisters and brothers younger than themselves.

Boys and girls so situated constitute a great majority of the total number found at work in factories and workshops. They are working for a living because there is absolutely nothing else to be done, unless the families to which they belong are willing to be supported

by charity, a course, be it said to the credit of those so bereaved, that is very seldom taken.

But these two groups do not by any means include all the children under sixteen who are at work. There are many others in the factories—boys and girls who have completed the school course of the localities in which they reside before reaching that age. These children, having received all the educational advantages within reach, or all that the family circumstances permit them to have, are out of school for good, and must, as a matter of course, seek employment instead of remaining idle. Cases of this kind present no feature of hardship.

Given a good common school education to start with the boy whose physical strength is equal to the work at which he may be placed loses nothing by beginning the battle of life at an early age. Idleness is far more productive of demoralization to youth than work of any kind has ever been.

Children in factories are divisible into the three groups partially described above.

There are, first, those who are put to work regardless of education at as early an age as possible by parents who could support them and send them to school if they only would. Shiftless fathers given to idleness and dissipation who do not provide properly for their families are responsible for most of these. The petty earnings of the children, often less in amount than what the callous hearted father spends in drink, is, in many instances, all that stands between the pitiful household and the most abject poverty. To deny such children the right to work, without the father can in some way be compelled to do his duty, is a cruel addition to the miseries surrounding them, which those only who are unacquainted with the trials of the poor can fail to understand.

Other cases of a less pathetic kind, but in the results almost equally hard on the children are instances, and there are many of them, where homes have been purchased through the medium of building and loan societies. For a period of ten or twelve years the monthly payments are, as a general thing, much in excess of the amount usually charged for rent. It happens often in cases where property is bought in this way that the father's wages are not equal to keeping the installments paid up, and at the same time provide for all the other wants of his family. There is no way out of the troubles of such a situation but to fall back on the earnings of the children (if

there be any), who are usually put to work at the first employment obtainable, and at the earliest possible age.

To pay off the mortgage is the object on which the efforts and interests of the entire family becomes concentrated, and the question of whether or not the children in their present employment have any prospect of a prosperous future for themselves is, if thought of at all, regarded as a matter of only secondary importance compared with the all compelling obligation to pay off the debt upon the home.

It not infrequently happens that in this way the years during which boys should be learning trades, or making themselves familiar with the preliminaries of their chosen life work, are wasted, not, of course in idleness, but at occupations not of their choice which offer few or no opportunities for future advancement.

The value of building and loan societies to wage earners and others with small incomes cannot be overestimated. No voluntary movement that has ever arisen among what may be called the working classes has done so much for their advancement.

The possession of a home, one of the strongest desires implanted by nature in the heart of civilized man, is brought within the reach of many who could in no other way save the cost of it out of the earnings of a lifetime.

The lives of persons so benefitted are improved in many other ways. Family pride and interest in home life are stimulated, and proper economy and thrift becomes a fixed habit. In fact, nothing except in praise can be said of the building and loan system itself; but it frequently happens that men, actuated by a praiseworthy zeal to acquire the ownership of the best possible home for their families, draw deeper on the credit allowed them than they should with due regard for the limit of their incomes. In other words, houses are built or bought of a quality beyond the purchaser's means. The result illustrates the old adage that a virtue carried to extremes produces substantially the same consequences as a vice. Payments to the building loan absorbs so much of the family income that only the smallest possible supply of the bare necessities of life can be provided out of what remains. The only means of escape from poverty in such cases is in the earnings of the children, who, as before said, are set to work at a much earlier age than they would be if the family were not thus tied down by their obligation to the building loan.

Many young boys and girls belonging to large families are found at work because the father's earnings are not sufficient to provide

for them properly, although every dollar of his income be spent for that purpose; these children see others whose parents are in easier circumstances, better dressed, and living in more comfortable homes than themselves, and eagerly take advantage of the first opportunity to earn something toward elevating their own family life to the same plane of comfort. In fact, it may be safely said that a large majority of children who are earning wages, particularly those who are fourteen years of age and upward, have this object in view.

Then, there are those who have completed the grammar school course, which most children do at between thirteen and fourteen years of age. A certain proportion of these go into mercantile business either in offices or stores; the remainder, and perhaps the greater number of them, the boys especially, seek and find employment in manufacturing establishments with a view to at once learning something toward increasing their wage earning capacity as workmen in the future. These children need no sympathy on the score of age, work is for them the only means by which true independence and advancement in life can be secured. The pity should be for those of them who cannot find employment soon after the close of their school lives, and are subjected to the risk of moral deterioration by long continued idleness.

Children of non-English speaking foreigners are now a very numerous element in the factory population of all sections of the State. These belong to families that as a general thing are large in number, and who, when they come here, are but very poorly equipped with either money or the kind of influence that would be helpful to them in gaining a foothold and establishing a home among a people to whose language and customs they are utter strangers. The great majority of these people have no knowledge of trade or handicraft of any kind that would make a demand for their labor. They must, therefore, compete in an already overstocked labor market for work of the commonest and most unskilled kind, and that under the great disadvantages of being ignorant of the language of the country, and having a physique that is almost without exception so weak as to disqualify them for the harder kinds of labor in which the best wages are paid. Seldom, at least in the beginning, and perhaps for a few years after coming here, are these men able to earn more than one dollar a day, which generally shrinks to a much lower average on account of the unsteady character of the work at which they usually find employment.

Where there are any at all, large families is the rule among these people; and manifestly, if they are to live and not become charges on the public, their children must work, and the right to do so, almost regardless of the question of age, should not be denied or interfered with, at least until the family circumstances have so far improved that some thought may be given to other matters besides the one great overwhelming question of how to merely keep alive.

In the course of the investigations made by the Bureau of Statistics many of these families were found consisting of the father and mother and six children, ranging downward in ages from fourteen years to a few months, making eight persons in all. All of them belonged to some one of the races in question, and in no case was the earnings of the father greater than seven dollars per week. They were living, and apparently in what seemed to them comfort, because in each case one or more of the children of the most advanced ages were employed in factories, and their earnings added to those of the father enabled the families to live and make ends meet according to their humble standard.

Without the children's assistance these families—and there are many of them, not a few having even larger numbers—would find it simply impossible to live on the father's wages of seven dollars a week: a per capita division of which among the eight persons to be supported would allow an average of only twelve and one-half cents a day for the maintenance of each of them, without making any allowance for rent.

The uncompromising opponents of child labor should consider these facts and modify their attitude toward the question accordingly. Undoubtedly school advantages are as desirable and probably even more necessary for these children than for those of more prosperous parentage; but it should be borne in mind that the first great natural law and obligation of life is to keep alive, and that until a way of solving the fearful problem of how to do so has been found, these people simply cannot spare a thought or an effort for anything else.

While immigrants of these races come in numbers equal to those of the past few years it may be regarded as certain that the total of young children in factories will not grow less, if indeed it does not greatly increase.

For the purpose of securing the best light obtainable on the reasons which impel children to work, the degree of education they have re-

ceived, and the conditions surrounding their factory and home lives, the Bureau instituted an investigation of the subject which was carried through the principal manufacturing towns of the State. The results are shown in a series of tables which follow this article. In making the investigation it was no part of the purpose to carry out a census of children at work for wages; doing so, even if it were desirable, would involve an amount of work beyond the resources of the Bureau to perform, and would add little, if anything, to the value of what it is desired to show.

Child labor is condemned by its opponents on several grounds; principal among them being the assumed physical unfitness of children for performing the kind of work at which they are often employed, without serious and permanent injury to health; the loss of opportunity for obtaining some kind of an education, and the consequent handicap placed by ignorance on their future lives, and the moral injury to which children are liable through association in factories with adults who may use vulgar, obscene, or profane language in their hearing.

Doubtless, as is well known to those acquainted with the subject, there are instances in which some one, or even all of these objections may be warrantably urged against the employment of children; but there is no reason to believe that such is the rule, or that, in fact, as a general thing, the physical health and moral standards of factory life are in any way below the averages which prevail elsewhere.

If it were otherwise the vicious consequences charged against the employment of boys and girls in factories would long ago have left traces of themselves upon our social life; for of our total population of 1,883,699 in 1900 there was 241,582, or only a small fraction less than thirteen per cent., who were employed at some form of manufacturing industry carried on almost entirely in factories and workshops. Of this number 51,661 were females over sixteen years of age.

Many, probably a large majority, of the men and women comprised in this great army of operatives, went into the factories at an early age, and in them learned the trades or handicrafts by which they are now earning an honorable livelihood. As a class, they have no superiors among our people; sober, law-abiding and industrious, their labor helps to support schools, churches and social institutions, and in many other ways enrich the communities in which they reside.

It is among these people that children entering factory life take

their places, and it is a slander originating in ignorance of the facts to charge that there is greater danger of moral contamination in such company than there would be in other surroundings.

As to education, it should be borne in mind that most children have passed through the grammar schools before reaching the age of fourteen, and there are comparatively few who go to work before that age; these cannot be truthfully said to be uneducated and condemned to a life of ignorance; indeed, if our schools are what we all like to believe them to be in the matter of thoroughness, such children have had educational advantages equal to those enjoyed by many, if not most, of the successful business and professional men of our day.

Nor need the educational process stop here; if the youth, on going to work, be desirous of carrying it further, there are evening schools, libraries, books, lectures and other facilities, all free and within easy reach, by the use of which his mind may be developed to the full limit of its natural capacity.

The material or manual work of the world will have to continue being done in the future as in the past, under conditions that do not require familiarity with the higher branches of knowledge on the part of those who are to do it, and the number so engaged will always constitute a vast majority of civilized mankind. A fair development of mind, which may be secured through a common school education, together with hands trained to skill in some chosen occupation, are the only essentials to success, and these are sufficient to carry their possessors higher should inclination and opportunity point that way.

There is probably more truth in the assertion that proper physical development is interfered with or prevented by some of the occupations at which children are employed, but even this charge may be, like other features of the subject, somewhat exaggerated; at all events, it is a question whether low diet, the result of insufficient means if the child be not earning something toward its own support, is not even more productive of physical deterioration and stunted growth than anything chargeable to work.

Either horn of the dilemma is bad; but it is a lamentable fact to which the eyes of those opposed to child labor in toto should ever be open, that very many children must of necessity be resigned to choosing one or the other.

No one acquainted with the average mental processes of civilized mankind, which are essentially alike in adults and in children of the ages under discussion will be surprised to know that most of the lat-

ter prefer the comforts procurable through work with all the risks of impaired health, rather than idleness accompanied by the distressing consequences of poverty.

Recognizing the fact that many children must work regardless of consequences, the State has thrown about them in factory and workshop every species of protection within its power to provide. The factory laws, framed for the benefit of all who are employed at manufacturing industry, contain many provisions of a stringent nature, drawn for the express purpose of safeguarding minors at work, as the following extracts from the statutes will show:

"The inspector and his deputies shall have power to demand a certificate of physical fitness from some regular practising physician in the case of minors who may seem to them physically unable to work, and shall have power to prohibit the employment of any minor that cannot obtain such a certificate."

"The belting, shafting, gearing and drums in all factories and workshops, when so placed as to be dangerous to persons employed therein while engaged in their ordinary duties, shall be securely guarded when possible; if otherwise, then notice of its danger shall be conspicuously posted in the factory or workshop."

"No minor under eighteen years of age or woman shall be required to clean any part of the mill gearing or machinery in any factory or workshop while the same is in motion, or work between the fixed and transversing parts of any machine while it is in motion by the action of steam, water, or other mechanical power."

"No minor under sixteen years of age shall be employed in any manufacturing or mercantile establishment for more than ten hours a day or sixty hours a week."

"The inspector of factories shall have power to order a fan * * for the purpose of preventing the inhalation of dust in establishments where any process is carried on by which dust is generated and inhaled by the workers."

"Factories and workshops in which women and children are employed and where dusty work is carried on shall be limewashed or painted at least once in every twelve months."

"If the inspector of factories find the heating, lighting, ventilation or sanitary arrangement of any factory or workshop is such as to be injurious to the health of persons employed therein he shall notify the proprietor to make such alteration or additions as may be necessary within thirty days, and failing to do so, the proprietor shall be deemed guilty of a misdemeanor within the meaning of this act."

"No person under the age of eighteen years shall be permitted to work in a biscuit, bread or cake bakery between the hours of seven o'clock in the afternoon and seven o'clock in the forenoon."

These paragraph extracts show the parts of the law designed for the exclusive benefit of children. The protection thus thrown about them is powerfully supplemented by other provisions of the general factory act relating to ventilation and sanitation, not quoted because they are applicable to all—males and females, adults and minors, who are employed in factories and workshops.

The law seems ample for the purpose, and, strictly enforced, there should be little or no cause for complaint. Whether it is or is not carried out with the necessary degree of vigor is a question over which there has been much dispute, often carried on without strict regard for facts.

But the enforcement or non-enforcement of the factory laws is not the subject of this inquiry; it belongs to another department of the State government exclusively, and will be touched upon here if at all, only so far as may be necessarily incidental to the limited study of the factory and home influences surrounding child labor, which is the only purpose of this paper. Further comment will, therefore, be limited to matters brought out by the inquiry, and which have a direct relation to it.

The plan followed was to send a reliable, tactful and intelligent agent into the principal factory towns of the State, with instructions to canvass the districts inhabited by the working population, with a view to finding families having children at work in the local mills or factories.

The agent was provided with a supply of blanks containing questions arranged to produce the information desired. These were filled out, in some instances, from statements made by the children themselves, or where this was not the case, by the parent or some other member of the family.

The greatest possible care was observed in making the canvass to avoid even the appearance of partiality for any one or another theory on the subject; children were sought and their statements taken where found, without reference to any consideration but that these should be absolutely true, or as nearly so as could be insured by the exercise of the uttermost care on the agent's part.

The questions on the blank, as will be seen by an examination of them, were arranged with reference to almost every current com-

plaint or charge made against child labor, and afford a full and free opportunity for showing to what extent or in what proportion such charges and complaints are well founded.

Name

Residence

Occupation

Age.....years. Sex..... If under age, has the child a permit to work from the factory inspector?..... Begin work..... A. M. Cease work.....P. M. Time for lunch..... Work extra hours..... How many..... Is the child regularly apprenticed..... For how long.....years. Give conditions

How long has the child attended school altogether..... At what age did the child begin work.....years. How much does the child earn per week..... What part of the child's earnings do the parents receive\$...... Do the child's parents require him or her to work..... Would the child rather attend school if a choice were allowed by the parents..... Is father living..... Is mother living..... Occupation of father..... Where was father born..... Where was mother born..... Is the child's health better or worse than when he or she began work..... How often has the child been sick since beginning to work..... Character of sickness..... Its duration..... Has the child attended night school since beginning to work..... If so, for how many months..... Can the child read.....Write..... Cipher in simple arithmetic..... Does the employer or overseer use abusive or profane language to the child..... Or in the child's presence..... Do fellow-employees use bad language in the child's presence..... Is the child's labor performed in a sitting or standing posture..... Is the work performed by the child of a kind that requires carrying heavy bundles or loads..... The weight of such bundles or loads.....lbs. Is the child subject to fines where employed..... For what.....

Nine hundred and thirty-eight returns were obtained, of which number 485 were from males and 453 from females. These statements are reproduced in a series of three tables preceded by four summaries in which the principal facts brought out by the inquiry are given by localities. These are taken up for analysis in their regular order.

SUMMARY TABLE NO. I.

All the summaries give the localities where the children are employed and the number considered. In addition to these items this table gives the sex of the children, their ages, working hours per day, time allowed for the midday lunch, the number who work over-time, and the number regularly apprenticed to the trade or occupation at which they are employed.

This table is the only one of the summaries in which the figures are given for males and females separately; the reason for this is that it shows the children's ages at the time the canvass was made, and under the law as it then stood the ages at which they might begin work was, for males, twelve, and for females, fourteen years.

It was also desired to show how the sexes are divided on the other propositions contained in this table, as that will indicate with sufficient closeness their division on matters treated in the three other summaries.

The numbers, sex and ages of those included in the canvass is shown to be as follows:

	Males.	Females.
Number considered	485	453
Number who are 12 but under 13 years old.....	3	2
Number who are 13 but under 14 years old.....	13	7
Number who are 14 but under 15 years old.....	99	79
Number who are 15 but under 16 years old.....	150	128
Number who are 16 years old and over.....	220	237

The proportion of the total number of males found at work who were over fourteen years of age, as will be seen by examining the above figures, is 96.7 per cent., and the females past the same age 98.0 per cent. It will thus be apparent that only 16 males and 9 females, or 3.3 per cent., of the former, and 2 per cent. of the latter would be disqualified by age for working under the present law.

In the number of hours worked per day the following division is found:

	Males.	Females.
Number who work 8 hours.....	31	16
Number who work 9 hours.....	159	32
Number who work 10 hours.....	280	381

Number who work 11 hours.....	14	23
Number who work 12 hours.....	1	1
Percentage who work 8 hours.....	6.5	3.6
Percentage who work 9 hours.....	32.8	7.1
Percentage who work 10 hours.....	57.8	84.2
Percentage who work 11 hours.....	2.9	5.1

It is much to be regretted that the movement for a shorter work-day has as yet made but little progress in the industries employing minors. The eight-hour day, at which substantially all workmen aim, and which many of them have already gained, seems to be only a scarcely discernible prospect of the dim future to the children, who, least able to bear the strain of long hours, should be the first relieved.

As is shown in the above table of percentages only 39.3 per cent. of the males and 10.7 of the females work less than ten hours per day. The great majority of the total number of both sexes are employed on the ten hour basis, but there are still a number, 2.9 per cent. males and 5.1 per cent. females, whose work day extends to eleven hours.

As to the time allowed for lunch at midday, the summary table shows that of the total number 918 have one hour and only 20 a half-hour. Overtime is reported as being required of 8 males and 35 females; the number of hours worked in excess of the regular time ranges from $5\frac{1}{2}$ to 11 per week. There are not enough instances of overtime to make it a marked feature of labor in any of the localities from which returns were received, but such as there was appears in the reports from Bridgeton, Camden, Gloucester City, Mays Landing and Millville.

In the matter of apprenticeships only 21 cases, all of them boys, were found among the total number considered, who were bound to their employers by some sort of legal agreement—a part of which was that the indentured ones should be fully instructed in the trades at which they were employed. Four of these boys are learning the machinest trade and seventeen of them are apprenticed to glass-blowing or glass mould making, all being employed in some one of the South Jersey towns, the names of which appears in the compilation.

SUMMARY TABLE NO. 2.

This table shows the length of time the children attended school before beginning to work, the ages at which work was begun, and

the weekly earnings at the time the inquiry was made. The figures are given for all without distinction of sex.

In the matter of school attendance prior to beginning work the showing is as follows:

Less than one year.....	36	Percentage of total..	3.8
One, but under two years.....	28	Percentage of total..	2.9
Two, but under three years....	31	Percentage of total..	3.3
Three, but under four years....	125	Percentage of total..	13.3
Four, but under five years.....	149	Percentage of total..	15.7
Five years and over.....	569	Percentage of total..	61.0

Among the number counted as having less than one year's schooling are four children of Hungarian birth who had had some education in their old home, but have not attended school since coming here.

Regarding attendance at schools for a period less than one year, as representing a condition of illiteracy, it is very gratifying to observe that the number so situated is only 3.8 per cent. of the total; the number who have attended less than three years is only 10 per cent., and 90 per cent. have enjoyed educational opportunities for periods varying from three to five years and over.

The largest absolute number, and by much the highest percentage of children with the lowest school attendance, was found in Hoboken. Eleven of these children were born in Italy and one in Poland. In this respect South Milville and Minotola come next to Hoboken.

The figures showing the ages at which the minors under consideration first began work are interesting and instructive. They are classified in the following table:

	No.	P. C. of Total.
Commenced work at 10 but under 11 years.....	5	.5
Commenced work at 11 but under 12 years.....	19	2.0
Commenced work at 12 but under 13 years.....	213	22.8
Commenced work at 13 but under 14 years.....	419	44.7
Commenced work at 14 but under 15 years.....	247	26.3
Commenced work at 15 but under 16 years.....	32	3.4
Commenced work at 16 years and over.....	3	.3

As shown by the above table, only twenty-four children, or 2.5 per cent. of the total number commenced work before reaching the age of 12 years.

Twenty-two and eight-tenths per cent. began when they were between 12 and 13 years; 44.7 per cent. between 13 and 14 years; 26.3 per cent. between 14 and 15 years; 3.4 per cent. between 15 and 16 years, and only three-tenths of 1 per cent. enter factories after reaching sixteen years. It thus seems that the pressure of circumstances which impel children to earn their own support in whole or in part is most potent between the ages of 12 and 15.

The weekly earnings as shown by the summary are as follows:

	No.	P. C.
Under \$3 per week.....	33	3.5
\$3 but under \$4 per week.....	301	32.1
\$4 but under \$5 per week.....	285	30.3
\$5 but under \$6 per week.....	151	16.1
\$6 but under \$7 per week.....	84	9.0
\$7 per week and over.....	84	9.0

Among those who receive \$7 and over per week are the glass-blowers' apprentices before mentioned, and one apprentice to the machinist trade. The earnings of the greatest number is between three and four dollars, and 78.5 of the total receive wages ranging from three to something less than six dollars per week; the percentage of the total number who earn more than six dollars is only eighteen.

SUMMARY TABLE No. 3.

This table shows the domestic circumstances of the children under consideration, with regard to parents living; and also the birthplace of the parents.

Seven hundred and three, or 75 per cent. of the total, are reported as having both father and mother living; twenty-five, or 2.6 per cent., have neither parent; twenty-five, or 2.6 per cent., have fathers but no mothers, and one hundred and eighty-five, or 19.8 per cent., have mothers but no fathers living. The birthplaces of the parents, that of the father only being given where both are foreigners born in different countries, are as follows:

	No.	P. C.
United States.....	422	45.9
Ireland	147	15.6
Germany	112	11.8

England (and Scotland).....	67	7.1
Poland	52	5.4
Hungary	25	2.6
Italy	63	6.6
Holland	24	2.4
Austria	11	1.1
France	7	.7
Other countries.....	8	.8

Eighty and four-tenths per cent. of the total were born in the United States, Ireland, England and Germany, and only 14.6 in Poland, Hungary and Italy—countries from which the volume of immigration during recent years has been very large.

The greatest number of children of foreign parentage was found, as might be expected, in the large cities; indeed, substantially all of them are in Newark, Passaic, Paterson, Jersey City, Hoboken and New Brunswick. The reports from South Jersey towns show that, with a very few exceptions, the children included in the canvass were of native parentage. In the six cities named above the proportion of children of foreign parentage is—Hoboken, 96 per cent.; Jersey City, 95 per cent.; New Brunswick, 84 per cent.; Paterson, 80 per cent., and Newark, 64 per cent.

SUMMARY NO. 4.

This table, the last of the summaries, deals with the educational attainments and what may be termed the influences having a relation to morals, that surround the children while at work.

Of the 938 cases under consideration, 888, or 94.7 per cent. are found to be able to read; 791, or 84.3 per cent. can write; and 736, or 78.4 per cent. are able to cipher in the simple elements of arithmetic. It may, therefore, be said that regarding proficiency in the three R's as the standard of a fair common school education, 202, or 21.5 per cent. of the total number considered, are without this indispensable aid to future advancement. Of course, it is not intended to say that this number are totally illiterate; 55 of them can both read and write, though not able to cipher, and 152 can read, but are ignorant as to writing and ciphering.

Only those who cannot read may be regarded as entirely without education, and these number just 50, or 5.3 per cent. of the total. This is three-tenths of one per cent. less than the proportion of illit-

eracy assigned to New Jersey by the Federal Census of 1900. It is, therefore, safe to say that in the matter of education the factory children are not behind, but rather a shade in advance of the general average.

Hoboken and New Brunswick are the only places in which illiteracy in excess of the general average, or indeed, anywhere near it, is found. Twenty-three children were reported from the first named place, of whom thirteen, or nearly 57 per cent. could neither read, write, or cipher. From New Brunswick, twelve out of thirty-one, or 39 per cent. were in the same condition of ignorance.

The number of children reported as attending night school is 354, or a little less than 38 per cent. of the total. These were found in the largest numbers at Paterson, Passaic, Newark, Jersey City, Hoboken, New Brunswick, Millville, and South Millville; in Paterson and Newark, the proportionate attendance was greater than in any of the other cities named.

As to the moral surroundings of the children while at work, it is gratifying to note that not one of the 938 children reports profane, vulgar, or abusive language addressed to him or her while at work by foreman, overseer, or other person in authority; but it is much to be regretted that the same cannot be said as to such offences *not* being perpetrated in their hearing. One hundred and one, or 11 per cent. of the total number, state that language of the character described above is commonly used about them and in their hearing, their presence, apparently, being no restraint. Again, the cities named above as having the largest attendance at night schools, enjoy the even more honorable distinction of being entirely free from this brutal form of offence against the sanctity of childhood.

Three hundred and ten, or 33 per cent., report having to stand continuously while at work; Paterson furnishes the greatest number of such cases because all the children included in the canvass from that place are employed in the silk or other textile mills, at work that cannot be done in a sitting posture.

The number who report their work of a character which requires the carrying of heavy loads is, happily, very small: only seven out of the total nine hundred and thirty-eight, report being thus burdened.

A recapitulation of the points brought out in the foregoing analysis of the summary tables shows in a still more condensed form, the facts developed by the inquiry. These are as follows:

Total number of children considered.....	938
Number of males	485
Number of females	453
Average age of males when canvass was made.....	15.2
Average age of females when canvass was made.....	15.3
Average working hours per day of males.....	9.6
Average working hours per day of females.....	9.9
Average time at school (years) before starting to work— males and females	4.2
Average age (years) at times of starting to work—males and females	13.6
Average weekly earnings—male and female.....	\$4.22
Proportion of the total (per cent.) who are full orphans.....	2.6
Proportion of the total (per cent.) who are half orphans.....	22.4
Proportion of the total (per cent.) who have both parents living	75.0
Proportion of the total (per cent.) whose parents are native born	45.0
Proportion of the total (per cent.) whose parents are foreign born	55.0
Proportion of the total (per cent.) who can read, write and cipher	78.4
Proportion of the total (per cent.) who can read and write..	84.3
Proportion of the total (per cent.) who can read only.....	94.7
Proportion of the total (per cent.) who are illiterate.....	5.3
Proportion of the total (per cent.) who attend night school..	38.0
Proportion of the total (per cent.) who report that their earn- ings are absolutely essential to their own support.....	53.6
Proportion of the total (per cent.) who would rather attend school than work.....	5.8

The home life and domestic circumstances of the children included in the canvass as observed by the agents who conducted it, fully bear out the previously made asertion that substantially all minors employed in factories or other places, are working under the pressure of necessity of some kind. With a large number, probably a majority, as it seems from the cases under consideration, it is a matter of bread simply; with others the motive is a desire for some of the reasonable comforts of life for the home and the person, in addition to common necessities.

Except in a comparatively few cases the homes were found to be comfortable, the family satisfied with their lot, and hopeful of the future: their chief anxiety being that there should be no official interference with their right to earn a living in a manner and under circumstances satisfactory to themselves.

Asked as to the severity of the work on which they are employed, the almost universal answer was that it is in no way distressing and entirely within the limits of their physical capacity. A few extracts from the memoranda accompanying each individual report will serve to illustrate the various phases of home circumstances revealed by the canvass.

No. 237, a girl: "Is working to earn money to pay for a course in stenography and typewriting."

No. 359, a girl: "Mother a widow: owns house in which family live: two children, one of them working. Mother very careful that children keep only good company."

No. 357, a girl: "Family consists of father, mother, and eight children. Father employed in a foundry, and five children are working; a good home."

No. 349, a boy: "Nine in family including father and mother. Father somewhat given to excessive drinking, but works with a fair degree of steadiness. Three children are at work and earn enough to keep the home comfortable."

No. 345, a girl: "Family consists of the mother, a widow, and two children. The mother and one child works."

No. 343, a boy: "Family consists of four persons. The father is an invalid and entirely unable to work; everything depends on the labor of the two boys. A fair home."

No. 340, a girl: "Mother says girl does not complain and claims to like her position. The family are thrifty, and their apartments are better furnished than the average. Brightness and cleanliness are visible in all their rooms."

No. 333, a boy: "Mother left a widow with eight children, two and one-half years ago. Three children are now at work, and four in the school; one an infant at home. Oldest child 16 years. With some money from father's insurance, purchased a house, rents top floor, the income of which pays taxes and interest on mortgage. A very respectable family making use of every resource they possess to maintain themselves decently."

No. 331, a boy: "Mother a widow with three children; two working. A comfortable home."

No. 330, a boy: "Boy is the only child in the family. Saving money to pay for a course in a business college."

No. 314, a girl: "Six children in the family: two working; a good home, influences of the best."

No. 313, a girl: "Father, quite old and feeble, is supported by the labor of three children. A good home and cleanly."

No. 312, a girl: "Mother a widow, does laundry work at home. Five children, one a son, is lame, but works in a butcher shop. Are thrifty people; child says she would rather work than go to school. She looks forward to operating a sewing machine soon, and will then earn more money."

No. 310, a girl: "Mother widow seven years; own the house they live in, unencumbered—a pleasant home and very respectable people. Three children in the family, two of whom are working. Both expect soon to enter a business college. One will take a night course this coming winter."

No. 306, a girl: "Father, mother and six children compose the family. Father and three children working; their united earnings supports a fairly good home. Children do not attend night school; are too tired to do so."

No. 304, a girl: "Father, mother and nine children constitute the family. Father and three children work. The home is good."

No. 303, a boy: "Boy is now sixteen; when much younger, he got beyond his mother's control, the father being dead. He was placed in the city home (Newark) for a time, after which he returned and went to work in a button factory, where he is now employed. His character has improved very much since going to work."

No. 302, a boy: "Mother, a widow, and this boy is the sole support of three younger children."

No. 292, a girl: "Father a cripple; six children, youngest one year old. Mother and two children work to support all."

No. 290, a girl: "Mother a widow; three children—one of whom works. Mother does laundry work at home. The earnings of the two support the family."

No. 285, a girl: "Father and two children work to support family of six persons. Live comfortably; own their home; and the children who work, attend night school all the time it is open."

No. 270, a girl: "Father, a laborer, works very hard and steady, wastes nothing on drink, but his wages are very small. There are five children in the family, only one of whom (this girl) is able to

work. The mother, besides doing her ordinary house work, earns something at laundrying, which she takes home. A worthy and respectable family of whom all their neighbors speak well."

No. 269, a girl: "Mother, a widow, works in same mill with this child; their joint earnings has to support two other children and an aged grandmother."

No. 263, a boy: "A large and industrious family consisting of the father, mother and ten children. The father is idle at present on account of a strike. When all are employed the united income is \$35 per week. The family has an excellent record for thriftiness. This boy is hoping to enter the Technical School at Newark, this coming winter."

No. 262, a boy: "Father, mother, and eight children constitute the family, two of whom are older than this boy. Wants to enter the Newark Technical School to study mechanical drawing, so as to advance in his present employment."

No. 259, a boy: "Mother a widow: five children, three working. Boy inclined to be shiftless, changes employment often; has a good home."

No. 254, a girl: "Works in a factory at present but is saving to pay for a course in business college."

No. 250, a girl: "Family consists of father, mother, and seven children, four of whom are at school. The father is a steady, temperate man, but earns little wages. The girl is very expert at the work engaged in and earns an average of \$9 a week. Another child, a boy of fifteen years of age, is earning \$6 per week. Very good home."

No. 247, a girl: "Mother, a widow with seven children, works in same factory with the child; one boy, fourteen years old, is also at work. Oldest girl keeps house for the family."

No. 407, a boy: "Three children in family; father has a good trade but drinks, and only works occasionally. Spends the boy's earnings when he can get it. The boy's work is light and he is expert at it. It is a question if he is as old by six months or more, as his father represents."

No. 406, a boy: "Six children in family; father intemperate; works irregularly, and would take the children's earnings if he could get them. Mother takes in laundry; a sister works in a button factory. The earnings of these three are about all the family of eight have to live on. All are recent immigrants to this country."

No. 405, a boy: "Mother a widow, eight children; three of them working, others in school. Mother works also when she can. Family very poor."

No. 385, a boy: "Mother, a widow, works. Five children, three of whom are employed. Eldest girl, not in good health, keeps house; a good home. After father's death, all who could tried to help support the family."

No. 527, a boy: "Family consists of father, mother, and ten children, all born in Italy. Father, a gardener, wages not very high; four of the children are working, and their earnings, with the father's, are just enough to comfortably support the home."

No. 497, a boy: "Has neither father or mother, lives with grandmother who is very kind to him. Assists her with what he earns as errand boy."

No. 495, a boy: "Father a common loafer; deserted his family. Mother and this boy, the support of themselves and younger girl."

No. 493, a boy: "Work of a light character, but dirty; is under the constant care of an uncle who is a moulder in the same foundry. Not overworked, but soon expects to change his business. Boy would go to work because he wants "to earn his own living."

No. 492, a boy: "Mother a widow with four children, of whom this boy is the oldest (14 years). His mother is employed in the same place. The hours are long, and the work continuous. These two are the sole support of family."

No. 488, a boy: "Mother a widow with three children; two of these and herself, are working and earning just enough to support the family."

No. 484, a boy: "Father a shiftless person; mother a very worthy woman, and has for years supported the family by her own unaided labor. This boy is now her only help."

No. 482, a boy: "Mother left a widow by the death of her husband three years ago. There were five children, the oldest 11 years. There was an insurance of \$750 on the husband's life, which shrunk to \$300 when funeral expenses and other debts were paid. This, with the mother's earnings has kept the family from want. The boy's wages, which are now added to the mother's, carries the family along comfortably. The boy is now saving a little weekly to buy a set of drafting instruments so he can study mechanical drawing at home."

No. 473, a girl: "The oldest of five children and the only one earning anything beside the father, whose work is very irregular. Home is very pleasant and family entirely respectable."

No. 470, a girl: "Father has a good trade, but is very reckless and drinks hard. There are two other children whose support has, for the most part, devolved upon this little girl. At times, has had to ask help from the charitable."

No. 469, a boy: "This boy is an only child, and father amply able to support him. Is too frail to engage in any kind of work, and does not appear to be as old as father claims."

No. 435, a girl: "Eight children in family, two of whom are orphan boys of a sister. The father is a hatter whose earnings are not large; the only help he receives in supporting the family is from this girl."

No. 432, a girl: "Family consists of father, mother, and five children. This girl (age 15) is the only one of the children working. The father's earnings are small and without the aid of the child, the family would find it hard to live. They have a fairly good home, and are very careful and thrifty people."

No. 431, a girl: "Father's health is very poor, and he works only irregularly. There are seven children, two of whom (including this girl) are working; practically the support of the family devolves on them. The child would like to attend night school, but the distance and lonely character of the neighborhood, prevents. Home, fair."

No. 429, a boy: "Father suffers from inflammatory rheumatism and has not been able to work for nine (9) years. Four children—family supported by mother with some help from relatives until three of the children were old enough and able to assist. Very respectable people."

No. 564, a boy: "Family consists of father, mother, and eight children (Holanders); father too old to work; three children employed in silk mill, four at school. Have an excellent home which they own outright."

No. 558, a boy: "Family consists of father, mother, and nine (9) children at home. There were eighteen (18) children, but seven are dead and two have married and left home. Of the nine children, five are working and four are in school. Their united earnings provides a bare living. The home is cleanly but destitute of furniture."

No. 650, a girl: "Seven children in the family, two of whom are working. Father a hard drinking man, so wife says, and seldom works. Almost her entire dependence for keeping home together is on what the two girls earn; both are skillful weavers in a silk mill."

No. 640, a girl: "This girl is a full orphan; lives with aunt, who has two children, and not in good circumstances."

No. 618, a girl: "Father in the insane asylum for several years; mother dead; three children, all working, bear excellent reputations."

No. 704, a girl: "Mother, a widow; seven children, two of whom work, others attend school."

No. 687, a boy: "One of two orphan boys. Parents both dead, ages 10 and 12 respectively. Have home with aunt; earnings of oldest boy supports himself and brother."

No. 745, a boy: "Mother a widow with three children, boy is very ambitious to get ahead and help his mother."

No. 734, a boy: "Family consists of father, mother and ten (10) children. Father's earnings are small; four of the children work, and their earnings, with the father's keeps a fairly comfortable home."

No. 718, a girl: "Five children in the family, three of whom are working. Father, a laborer, works irregularly and drinks to excess, disposed to live on children's earnings. Mother doing best she can to keep family together."

No. 931, a boy: "Mother, a widow nine years; has three children, all working in a lead pencil factory at Hoboken. The oldest girl has been lame since birth; the work given her is light, the wages corresponding. Mother also goes out to work by the day. A good home notwithstanding all these drawbacks."

The foregoing notes are fairly illustrative of the home or domestic side of the child labor question; the number quoted might be increased by many hundreds without, however, bringing to light one additional reason why children with no other means of maintenance must work to support themselves and other helpless members of the families to which they belong.

Almost without exception these people are contented with their lot, and looking hopefully to the future for the improvement in circumstances which they feel themselves competent to work out, if permitted to help themselves without interference from amateur sociologists, who for the most part know nothing of them or their affairs.

In canvassing Newark, Jersey City and Passaic it was found that the children of foreigners far outnumber those of the native born. Excepting Newark, where the proportion is not so great, fully 75 per cent. of the children at work in these places are foreigners.

The impression that children of foreigners have forced the native born out of manufacturing industry does not seem to have been proven correct by the canvass of the cities in the northern part of the State. As a matter of fact, it appears that American children regard factory life and its associations with disfavor, and prefer to work in stores and offices, often with longer hours of labor, lower wages and poorer prospects of advancement.

Foreigners have, in a large degree, supplanted children of native parentage because of their readiness to accept disagreeable labor tasks without complaining. The experience in the factories is that when a boy or girl is disposed to be diligent, attentive and exercises intelligence in the work to which they are assigned wages advances regularly and when up to eighteen years of age receives fair remuneration. This will be seen by examining the general tables which follow further on; the facts as to each individual included in the investigation are given in these tables, and many instances will be found where minors of eighteen or thereabout receive from nine to twelve dollars a week.

In many of the factories it was found that strict care was taken to guard the morals of the children employed; vulgar or profane language in their hearing is strictly prohibited under penalty of immediate discharge.

It was noticed in making the canvass that the homes of the children, although situated for the most part in the poorer tenement districts, were, generally speaking, clean, tidy and fairly well furnished. This was often found to be the case where the family income was very small, and where the reverse of these conditions might well be overlooked or even excused on the score of poverty.

On the other hand, some were found who, with the earnings of father and children, should live on a higher plane.

A family was found in Passaic consisting of parents and eleven children, six of whom were working. They all lived together in four rooms, monthly rental \$7.00, the father—a shoemaker—having his shop in one of them. The united income of this family was not less than \$36.00 a week. The number of cases encountered of which this family is a fair type, were not many, but still there were some, and all exhibited the same chilling aspect of poverty that might not exist in fact if only there was proper management, as in every instance the incomes were found to be sufficient to warrant a better style of living.

A view of the children going to and from the mills showed that nearly all were comfortably dressed and had no appearance of being overworked. There were very few instances of children of working age being found at home sick. None at all from overwork.

In Paterson there is a large population of Hollanders; many own their dwellings, and are a thrifty and intelligent race. Their children are kept at school until beginning to work, and thereafter, with scarcely an exception, attend night school.

Children of Hollanders are mostly found in the silk mills, and are regarded as very efficient and reliable workers. As a consequence they are more sought after and receive better wages on the average than any other class of foreigners.

The children of the Poles and Hungarians work in the shirt factories and woolen and worsted mills. Comparatively few of them are in the silk mills.

The Hebrew population of Paterson is very large. The children are in all trades, not over twenty per cent., it is said, work in the mills or factories. Their ambition is to save money and own a business of their own. The owners of a number of large industries are Hebrews who began as mill hands.

In Passaic, the children in the mills, by races, predominate in about the following order: Poles, Hollanders, Hungarians, Italians, and a small number of other nationalities. All are employed and reside in the district known as Dundee. From two to four families live in a dwelling, the average being about three. The home conditions are, generally speaking, only fair.

In Jersey City most of the children included in the canvass are employed in the works of a large tobacco company, a crucible and lead works, a soap and perfume manufactory, and in paper box factories. The tobacco works is reported to be under excellent moral and sanitary discipline. Profane or indecent language in the presence or hearing of minors is followed by the instant discharge of the offender. Younger children are allowed to quit work at an earlier hour than others, and in many other respects indulgences are extended to them. When first beginning to work the odor of tobacco causes nausea, but that soon passes away. Experts on piece work earn very good wages. The same rule of advancement obtains here as elsewhere; intelligence and attention to work command the best returns.

In the crucible and lead works, besides the children regularly em-

employed who range between the ages of fourteen and seventeen, there are a number of younger ones who work during school vacation on special permits from the factory inspector. The work is unclean, and said to be unhealthy; many children are employed, and wages paid them are low.

The paper box factories are model establishments in the matter of ventilation and cleanliness; the best of order is preserved, and excellent care is taken of the children employed in them. The work is clean, light, interesting, and such as children may be employed at without risk of physical injury. The business is easily learned, and minors starting at the minimum may soon become proficient at the work and earn from \$7 to \$12 per week.

The soap and perfumery works, also, is in high repute among both parents and children as an excellent establishment to work in. Employees are encouraged to do their best and work is absolutely steady.

A sugar refinery and an electric company in Jersey City employ a considerable number of minors; wages in these places are fair, and the discipline necessary for the protection of the children employed is very strict. Very few parents were found who complained of children being overworked, while many said that the little ones liked their employment, found it as interesting as play, and were well treated by their employers.

A word about the quarters of the city in which the working part of the population reside, although not strictly related to the subject of child labor, may not be amiss.

Many tenements of the north, south and west sides of Jersey City were found in very bad condition; broken walls and stairs, and ill-smelling hallways and passages, showing no effort apparently on the part of either landlord or tenant to keep them clean, seems, with very few exceptions, to be the rule. Streets in some sections encumbered with ash and garbage heaps, and gutters filled with stagnant, dirty water, rows of dwellings, weather-stained on the outside and befouled by long accumulation of dirt within—the whole presents a picture of squalor caused by long continued neglect and decay, that is shocking to humanitarian sympathies and shameful to the community that, apparently, looks on such conditions with indifference.

There are few factories that are not more cleanly, bright and cheerful within than are these habitations, and also have a more sightly and unobjectionable environment without.

There are, of course, even in these neighborhoods, some few houses

in better order; but even these are only decent by contrast with the others, and are far below what the standard of homes for civilized human beings should be. If the landlords of tenements were compelled to do as well as factory owners in the matter of sanitation and ventilation life for dwellers in tenements would soon assume a more cheerful and hopeful aspect, and an obstacle to the mental and physical development of children that is at least as formidable as any encountered in their factory lives would be removed.

Many workmen, particularly foreigners of the races now coming here in large numbers, seem to be satisfied with any place to live in if only it be a shelter; some, on account of low wages cannot do differently, and others do not care. There are many who expend as little as possible on the home and the necessities of life in order to save money to go back to their native countries, or to become real estate owners themselves at some future day.

Many tenements were found while making this canvass containing from six to ten families, owned by foreigners who, a few years ago, were as poor as any of their tenants now are, and who themselves lived under equally disagreeable conditions, and even now in many instances occupy a portion, generally the poorest, of the dwellings of which they are proprietors.

In most of the towns canvassed the quarter in which a majority of the factory children find homes were noticed to present, only in a somewhat less degree, the same disagreeable features; more particularly in places where the population of the class above referred to is very numerous.

In New Brunswick there are a large number of factories in which women and minors of both sexes form almost the entire working force.

A sheet metal and a lamp manufactory, under one management, employ about fifty of both sexes between the ages of fourteen and seventeen years, the majority being over fifteen. It is claimed that no boys under eighteen are allowed to work on power presses; the number injured this way is not so large as rumor generally represents it to be. Two young men recently hurt in that way were found to be over twenty, and both intended to return to work in the factory when fully recovered.

It is also said by those connected with the firm, and by reliable persons outside who have a knowledge of the business, that, with proper care on the part of operatives, accidents need not occur. Press

hands are provided with a tool intended to remove obstructions from under the punches, and are warned not to use their fingers for that purpose; but this caution is systematically disregarded, with the result that accidents involving the laceration of fingers and hands do sometimes happen.

The lamp works is on the line of the canal, over which the toilet room for men and boys is constructed; that for women and girls is inside the building. The first is far from what it should be either in location or condition; the second is entirely unexceptionable. The firm has several times had their attention called to the condition of the male toilet accommodations, but so far no improvements have been made.

Wages begin at \$3.50, and increase to \$4, \$4.50 and \$5 per week. When from eighteen to twenty years of age, working piece work, from \$6 to \$9 may be earned, and later higher wages are reached.

A large manufacturing company occupies a new factory finely located on the highest ground in the city; it contains all modern improvements and has perfect ventilation. Women are employed, whose sole duty is to keep every department clean and in perfect order, and the grounds around the buildings are made very attractive. About nine hundred persons are employed, mostly foreigners.

Going to and from the factory the employees were cleanly and fairly well dressed; none had the appearance of being overworked, and only a small proportion were under seventeen years of age. Employees addressed on the subject spoke highly of the management and the orderly character of the establishment.

A hosiery company employs between six and seven hundred persons, of which number only a few are men, and these are principally in the dye house. Not over one hundred are under seventeen years of age, and of these a majority are over fifteen. The mills are kept clean and in perfect order. A large number of the mill employees live outside the city limits, and have good homes with pleasant, healthful surroundings.

A manufactory of medical supplies occupy fine buildings, well lighted and ventilated, with perfect sanitary arrangements. A large proportion of the seven hundred employees are minors, and of these a majority are females. Wages are said to be low for beginners, but the conditions surrounding them at work are made as nearly satisfactory as possible.

There is also large rubber works, and a wall paper factory in

which some children of both sexes are employed; in these the sanitary arrangements are good, and the general environment in other respects as near what it should be as the nature of the business carried on will allow.

Taking all the mills together, the percentage of employees under seventeen years of age seems to be very small; the great majority seem to be over eighteen, and none were met in the course of canvassing who appeared to be or whose ages were given as less than fourteen.

Both from a careful scrutiny of those going to and from work and their own direct statements on the subject to the agent who made the canvass it would seem that about ninety per cent. were over seventeen years of age. All were cleanly and comfortable dressed, more particularly so those employed in the hosiery works and the manufactory of medical supplies.

The residences of the working people here are much better than those found in any of the other manufacturing cities in the northern end of the State. There is no unsightly and unsanitary tenement quarter, and many own their own homes largely through the aid of building and loan societies.

In Hoboken the canvass was limited to the section of the city in which a large lead pencil works is situated. A particularly large proportion of the employees are minors of tender age, some boys appearing to be scarcely twelve. The firm accepts young children to work on vacation permits while the schools are closed, and the wages paid are very low. A large majority of the employees are foreigners, Italians being most numerous. Viewed on the street while going to and from the factory the children presented no special evidence of being overworked, but on the average they appeared lacking in intelligence and were very poorly dressed. Very few attend night school after starting to work, and even before beginning many are irregular in attendance at day schools.

The Third and Fourth Wards of Hoboken are largely populated by foreigners, one of them being almost wholly so. Tenement houses four and five stories high are found on the front and rear of lots, and have in both dwellings twenty or more families. Including boarders, it is not uncommon to find one hundred and fifty or more persons sheltered in them. The pencil company's factory is situated in this part of the city, and being about the only place in which child labor

is employed on a large scale, the supply far exceeds the demand, and any wages offered are accepted to secure work. No complaint was heard against the firm, except the generally expressed one of low compensation. Strict rules are enforced in all parts of the works.

The tenement house life found in Hoboken is, with a few exceptions, better than that of Jersey City.

The foregoing covers the observations made while conducting the canvass in the manufacturing cities and towns named above. In what follows the conditions surrounding child labor in South Jersey, more particularly in the glass districts, where, as asserted by many of its opponents, the worst features of the system, coupled with an apparent paralysis of the law on the subject, are to be found. The inquiry in this part of the State was, therefore, made with the uttermost possible care that nothing relating to the subject not first ascertained to be absolutely reliable should find its way into the report.

The canvass included practically all South Jersey towns in which manufactories are found, and all the industries in which minors of either sex are employed to any great extent: but, as before said, most of the criticisms on child labor have been directed against the glass houses, and for that reason special attention was given to the glass producing towns of Bridgeton, Glassboro, Millville, Minotola, Vine-land and Salem.

As regards the sanitary and hygienic conditions of factory buildings, these were found to be, as in the northern towns, a mixture of good and bad, with, of course, the good largely predominating. The agitation for factory improvement, coupled with that for limiting child labor, has done much here, as in other parts of the State, toward wiping out the old style of illy-ventilated, dark and unsanitary factory buildings or greatly modifying their worst and most unhealthful features.

Manufacturers now appreciate the importance from a purely business standpoint, even, of conserving so far as practicable the health of their operatives, and so, science having prepared the way, substantially all new plants are now constructed on lines that, as nearly as possible, insures this result.

Workrooms are large, well lighted and ventilated, and kept as clean as the nature of the business permits. Ceilings are lofty and floors strongly and firmly laid. The vibration caused by the motion of machinery, which physicians declare to be highly prejudicial to the health, particularly in the case of women and children, is thus

prevented. The crude sanitary arrangements of the past have given place to modern conveniences, the perfection of which is a sure guarantee against the danger to health inseparable from the old order of things.

Of course, there are many old factory buildings still in use, in which few or none of these modern features are found; but under the stress of competition these will sooner or later go to the limbo to which so much other obsolete machinery of production has gone during recent years. The evolution of factory construction is now so far advanced that nothing can check its progress until the splendid modern type of factory building now so familiar in all manufacturing centres of our country has become the habitation of industry everywhere.

The glass houses have shared in the general improvement, and now present many important features designed for the protection of operatives and to facilitate their work, not to be found in them a few years ago. The good effects are plainly manifest wherever these changes have taken place. On the part of operatives there is a noticeable cheerfulness and a capacity for sustained effort during working hours which goes to show that under the new conditions earning the daily bread in mills and factories is not the physical and mental drudgery it once was. But the purpose of the inquiry was to bring out facts relating to child labor, and factory improvements are only referred to as having an important bearing on the environment of children employed in them.

The individual reports secured by the agent who obtained his information directly from either the children themselves or their parents shows none, according to the statements received, who are under twelve years of age, and comparatively few who are less than fourteen. A personal visit to the cotton mills, garment factories, light metal working establishments and other places enumerated in the first of the general tables, and an inspection of the minors employed in them revealed none who appeared to be below the then legal age of twelve years.

In the glass factories, with one exception, no boys under twelve years of age were found at work, and therefore none were covered by affidavit of parents or permit of factory inspector. When spoken to on the subject, several glass manufacturers declared that none would be employed, as the agitation of the subject in the press and the Legislature had become a source of annoyance and trouble to

them. They had, therefore, determined to employ none below the legal age, either with or without permit.

What they may decide to do when the new law, which raises the age to fourteen, goes into effect remains to be seen. Many of the glass firms seem to anticipate trouble in finding a sufficient number of boys under the new law to fill the minor places in their factories, and seem to regard it probable that they will be unable to run much more than half their usual number of furnaces because of the scarcity of tending boys.

A visit to the glass factory above referred to as an exception in the matter of ages of boys employed resulted in finding several who were, undoubtedly, under twelve years, but their right to work was backed up by permits from the factory inspector, or affidavits of parents to prove that, notwithstanding appearances, the children to whom they referred were over twelve years.

In one of the mills some children were found who had been dismissed by the inspector on the occasion of his last visit, but who had again been admitted to employment notwithstanding his order excluding them.

There may be and probably are other places in which even now the efforts of the inspector are circumvented, and the intent of the law set aside by similar expedients; but the two instances cited—the glass house and the mill—were the only establishments among the number visited, found not to be, in appearances at least, living up to the letter of the statute. But up to a comparatively recent time there seems to be no doubt as to the law having been evaded, and even openly disregarded in certain establishments in the glass districts, and also to some extent in other lines of industry. Just now the law is being obeyed in these places, but whether they revert back to the old policy of evasion will depend altogether on the zeal and intelligence with which the inspectors enforce the new act, and the degree to which they shall be sustained in doing so by public sentiment.

Inspections should be more frequent than they have been, and care should be taken that the time of the inspector's coming should not be known to the managers whose works are to be visited. It would also be good policy to follow up an inspection with another soon after to see whether such order as might have been given on the occasion of the first visit is being obeyed. Apparently there has been in the past some abuses of the power to issue permits; children thus excepted from the operation of the law were not all found to be

in the distressed circumstances which would alone warrant their being so indulged, and many seemed to be below twelve years of age. But as the new law has abolished permits entirely and shuts out absolutely all children under fourteen years of age, there is nothing to be gained by dwelling further upon that phase of the subject.

What has been said as to the reasons for children being in the factories in other parts of the State will apply with substantial accuracy to the districts now under consideration. There is not nearly so much actual poverty here as, apparently, the foreign immigration that is crowding the industrial centres of the middle and northern parts of the State has not yet turned in this direction, but all the other incentives to work remain—a desire for better and more comfortably furnished homes, neater dress, and in the greatest number of cases, because there is nothing else to do, the child having finished at school.

The following statements relating to a dozen families gives a fair exhibit of the prevailing domestic conditions among those having children at work in the factories. The children referred to are all under fifteen years of age.

1. Family of five persons. Father earns \$18 a week; two boys at work earning, respectively, \$5 and \$3.50; combined earnings per week \$26.50. Comfortable house, well furnished; boys have had four years each at school; can read, write and cipher very well. Would rather work than attend school. Both in good health.

2. Family of four persons. Mother a widow, with three children. Two boys at work earning respectively \$4.80 and \$3.65 per week; mother earns \$5 to \$6 a week sewing; combined earnings of family \$13.45 per week. Small house, scantily furnished. Rent \$10 per month. Boys have attended school for about four years, and have a fair elementary education. Oldest boy healthy, youngest quite delicate.

3. Family of three persons. Father earns about \$30 a week; boy in factory earns \$3.65; combined income \$33.65 weekly. Family owns the house they live in, which is a fair residence, handsomely furnished. Boy would rather attend school than work, but father will not permit him to do so. Has had three years at day school, and four terms of three months each at night school. Boy is robust in appearance.

4. Family of five persons. Father earns \$12 per week; two boys in factory earn \$3.70 each; combined income \$19.40. House is small

but neat and well furnished; rent \$9 per month. Boys have attended school for about five years, and would like to continue; can read, write and cipher well.

5. Family of four persons. Widow with three children, all girls. Mother not able to work, being an invalid. One girl does the housework and two work in mill; earn between them \$11.75 per week. Home, four-room apartment, plainly, but neatly furnished; rent \$9 per month. Girls had upwards of four years of school while father was living; can read, write and cipher well. Health fairly good.

6. Family of four persons. Father earns \$15 per week; two boys in factory; oldest earns \$4.80 and youngest \$3.05 per week; combined earnings \$23.45. Occupy an apartment of six rooms, which are plainly furnished; rent \$11 per month. Boys have attended school for five years, and have fair education. Would rather go to school than work in factory. Both in excellent health.

7. Family of six persons. Father earns \$28 per week; three boys in factory, who, between them, earn \$12.10 a week; combined earnings of family \$40.10 per week. Father owns the home, which is comfortable and well furnished. Boys had over four years in school and can read write and cipher in simple arithmetic. One of them would rather attend school than work; he wants to qualify himself for a profession. When asked why he put the boys to work, seeing that he could support them at school, the father answered that he thought they (the boys) should earn their living as he had to do at their age.

8. Family of five persons. Father earns \$9 a week as day laborer; three boys work in factory and earn between them \$12.80 per week; united incomes \$21.80. Habitation, house of five rooms, scantily furnished; rent \$9 per month. Boys have been but a short time at day school, but have gone to night school since beginning to work; read and write passably, but are very deficient in arithmetic. Would rather work than go to school. Health good.

9. Family of four persons. Widowed mother and three children. Mother earns nothing, family supported by two boys, who earn between them \$8.50, and a girl, who earns \$5 per week; combined income \$13.50 per week. Apartment containing four rooms, poorly furnished; rent \$9 per month. Children have averaged about five years each at school, and have a fairly good education. Girl would rather be in school. Boys in good health; girl inclined to be delicate.

10. Family of six persons. Father earns \$20 per week; two boys in factory; oldest earns \$3.70 and youngest \$3; united earnings \$20.70 per week. Father owns house, which has modern improvements and is neatly furnished. Boys have had five years each in school and are fairly educated in rudimentary branches. They are dissatisfied with work in the factories, and want to learn trades.

11. Family of four persons. Father earns \$12 per week; two boys at work, one in mill and other in factory, earn between them \$9 a week; combined income of family \$21. Home, five rooms, poorly furnished; rent \$10 per month. Boys have had only a very limited time at day school; what education they have, and it is very little, was secured in the night schools. Both dislike the work at which they are engaged, and would like to learn trades.

12. Family of three persons, widow and two daughters. Mother works at making common shirts, and earns about \$5 per week. Daughters work in cotton mill; oldest, a weaver, averages about \$6 per week, youngest gets \$3.75; combined earnings of family \$14.75 per week. Home, four rooms rather scantily furnished, for which \$8 rent is paid. The girls have had several years in the schools, and are bright and intelligent. They enjoy good health and work contentedly to help their mother, although the oldest had hoped to become a teacher.

The foregoing cases are fairly representative of conditions, financial and otherwise, found in the many homes in this section that was visited during the progress of the canvass. The number used for illustration could be multiplied many times over without shedding any additional light on the subject.

Nothing sensational is brought to light; the families are, with only a few exceptions, shown to be living in comfort on incomes derived in part from the labor of the children, it is true, but this is not being done at the sacrifice of the child's opportunity to acquire at least the rudiments of an education.

In only a very few instances was it found that children could not read and write well, besides being able to make calculations in simple arithmetic. Although the head of the household, in most cases, earns a fair weekly wage, there are but few who could support their families in a way satisfactory to them without some assistance from the children.

In several cases the fathers stated that they would rather have the children at school but could not induce them to remain there, as

they preferred going to work, in which determination the parents had to acquiesce rather than have them walking the streets in idleness.

The home comforts of children whose cases came under observation were found to be good and fully up to the average standard of American family life elsewhere. The incomes of the families to which they belonged, in part the product of their own labor, was found to be, generally speaking, sufficient to provide good food and wearing apparel; their surroundings in the factories and workshops from the point of view of health are, in most cases, excellent, and improvements are being made as fast as the means for making them are developed.

Probably the most seriously objectionable feature to be noted in connection with child labor is the employment of boys of tender years in the glass factories at night. Night work is more than many full grown and healthy men can endure, and some give up their places rather than work at the tank furnaces on the night shift. With such positive evidence of its severity, it does seem that the State would be justified in prohibiting the employment of children at such work, or, indeed, at night work of any kind, who are under eighteen years of age. When men are found who cannot stand it how much more heavily does the strain of night work bear upon boys, many of whom in the past at least were not more than twelve years of age.

Of course, the glass manufacturers will contend that running the furnaces at night is necessary to getting out the work required to fill orders and maintain their business, but where night work is a fixed feature of the glass industry, and it is so in many establishments, there is no reason why an enlargement of the plant should not be made, and all required work done in the regular working hours of the day.

If this cannot be done, and the plant must be run night and day, then it certainly would be no hardship to require that this extra strenuous work should be done by men only, and not to a large extent, as is the case now, by young boys.

Of course, the employment of men in this field of labor would entail an increase of expenses upon the employers, but that is not a valid objection, and the increased cost of production should be met as are other contingencies of trade, by an increase in the selling price of the product. But, however it may be done, an impartial investigation of the circumstances can lead a humanely disposed observer

to but one conclusion, which is, that the employment of young children in the glass houses or other factories at night should cease.

The reasons are obvious. It is contrary to natural law. Night is the proper time for sleep, and children, particularly, require it in full measure and under natural conditions. A person who visited a glass works in full blast at midnight says of what he saw: "There are the little mould shutters sitting in cramped positions mechanically performing the work of opening and closing the mould; their eyes heavy with an overpowering desire for sleep. See them when work is done throw themselves upon the ashes, where they sink to sleep in spite of their efforts to keep awake. Many of the little fellows are afraid to go to their homes through the gloom of the night, and the silent and deserted streets, and an understanding may be had of why this form of child labor is so objectionable.

"These boys are growing up in partial ignorance and with impaired physical health. The nature of their employment shuts them out from night schools, and they are too weary and worn to attend day schools. If they have been fortunate enough to have had some few years in the schools before going to work that is as far as they may expect to go. This kind of employment shuts them out from every opportunity of securing a trade or profession, and they are apparently condemned to remain on the lowest and most illy paid level of labor throughout their lives."

There is a law which forbids the employment of women and minors in factories for more than fifty-five hours per week, and there are but very few places in which the act is violated to the extent of working them overtime at night. To this wise and humane statute should be added another provision explicitly prohibiting the employment of children of either sex at night work who are under eighteen years of age."

In conclusion, it only remain to say that the facts set forth in the foregoing paper and the figures which appear in the tables that follow were obtained by a careful canvass of the field of child labor, limited in extent, of course, but still comprehensive enough to form an epitome in which every phase of the system, good or bad, is shown.

The facts were collected in the first place and are here presented without prejudice against, or bias of any kind in favor of, any theories regarding the employment of children with which the public are familiar. The work has been done in a spirit of the warmest

interest in childhood and sympathy with every sincerely conceived measure for its protection and betterment, whether these derive their sanction from the laws of the State, or the equally potent force of public opinion.

The subject of child labor is one that appeals with particular force to the emotions. A wrong to childhood seems to men and women of generous, sympathetic nature, such a monstrous thing that in their minds one accused of such a crime is generally convicted without a hearing.

But care should be taken in considering the subject that the head and the heart have equal play in reaching a conclusion.

The force of most of the objections urged against child labor will be readily admitted if the other side of the question, for, unhappily, it has another side, is not also taken into consideration.

Its uncompromising opponents should consider the following propositions: What is to be done in the case of orphans, children left without means, or relatives who are both able and willing to support them? If the law denies them the right to *earn* a living, must they not take refuge in some charitable institution or become public charges in the almshouse?

Again, what is to be done in the case of a widow left with a large family of young children dependent upon her for support: she having no income except what she may be able to earn by laundry or some other line of illy paid labor? She has boys who are sturdy and strong, though under the age prescribed by law: she needs the help these boys are eager enough to give, so that a home, food and clothing, may be provided for the family. How is it possible for her to meet these wants, the law forbidding her to utilize their labor?

And further, what is to be done in the case of a dissipated father who will not work and leaves his family without support—It is true he can be locked up for his neglect, but that does not help the wife to solve the domestic problem. She has boys both able and willing to work, who can readily find employment, but—the stern interdict of the law is in the way, they being less than fourteen years of age, and the family must suffer because they are not permitted to use their own resources to help themselves.

Finally, what is to be done in the case of boys who will not attend school? The parents have exerted their authority to its limit in the endeavor to make them do so, and, failing, wish to place them at work which is agreeable to the wishes of the rebellious child, to pre-

vent their utter demoralization through idleness, but—the State says no, they are not yet fourteen, and until they reach that age nothing can be done.

These are questions, the consideration of which cannot but lead to the conclusion that the question of child labor is a many sided one, and that it cannot be dealt with in the offhand manner which many advocate, and which the law now follows. While striving for the children's good, care should be taken that the means adopted to that end are not such as to do them harm instead.

The laws which deal with the subject should recognize the fact that all cases are not alike, and authority should, therefore, be given to some one responsible for their enforcement to suspend the age limit in cases like those cited above, where its enforcement would be a palpable injustice.

Summary Table No. 1.

LOCALITY WHERE EMPLOYED.	Total number of children considered.	Sex, Number of	Ages, Number of Males (M) and Females (F) who are					Working Hours per Day, No. whose regular hours are					Time for Lunch, Number who have	Number who work.	Overtime per week.	Number who are regularly apprenticed.
			12 years.	13 years.	14 years.	15 years.	16 years and over.	8	9	10	11	12				
Bridgeton	32	43	9	1	M 1 F 5	M 19 F 4	M 14 F 1	M 8 F 1	M 26 F 1	M 8 F 1	M 1 F 8	M 1 F 1	46	6 F	1 M 10 0	5
Canden	27	9	18 F	M 1 F 1	M 1 F 8	M 5 F 5	M 6 F 3	M 6 F 1	M 9 F 1	M 17 F 1	M 1 F 1	M 1 F 1	26	1 M 1 F	1 M 11 7	10
Gape May Court House	30	20	M 1	M 1	M 7	M 6	M 3	M 3	M 20	M 13	M 1	M 1	20	2 F	7 F 10	1
Clayton	13	14	M 1	M 1	M 2	M 4	M 3	M 3	M 6	M 3	M 1	M 1	6	1 F	1 F 1	1
Glassboro	7	7	M 3	M 1	M 2	M 2	M 1	M 1	M 6	M 3	M 1	M 1	10	1 F	2 M 10	1
Gloucester City	10	3	7	M 1	M 1	M 1	M 1	M 1	M 7	M 2	M 2	M 2	7	2 F	4 F 10	1
Mays Landing	7	2	5	M 2	M 3	M 2	M 2	M 2	M 3	M 2	M 3	M 3	3	3 F	2 F 5	1
Medford	30	20	30	M 2	M 13	M 10	M 7	M 5	M 14	M 6	M 1	M 1	47	3 F	3 M 11	1
Millville	33	31	2	M 15	M 2	M 5	M 1	M 1	M 31	M 1	M 1	M 1	27	6 F	6 F 10	5
South Millville	5	5	M 1	M 1	M 1	M 1	M 1	M 1	M 4	M 1	M 1	M 1	6	1 F	1 F 1	1
North Millville	5	5	M 1	M 1	M 1	M 1	M 1	M 1	M 4	M 1	M 1	M 1	2	3 F	2 F 5	1
Minotola	263	125	141	M 4	M 19	M 29	M 73	M 21	M 6	M 88	M 9	M 1	236	2 F	3 M 11	1
Newark	61	30	31	M 1	M 6	M 3	M 18	M 5	M 15	M 5	M 11	M 9	61	1 F	1 F 1	1
Passaic	188	88	100	M 2	M 13	M 20	M 52	M 30	M 27	M 67	M 1	M 1	188	M 1	M 6	6
Paterson	14	11	3	M 1	M 6	M 4	M 4	M 3	M 8	M 3	M 3	M 3	14	F 1	M 8	8
Salem	21	15	6	M 1	M 4	M 6	M 4	M 3	M 12	M 3	M 3	M 3	21	F 1	M 10	1
Vineland	3	3	M 1	M 1	M 1	M 1	M 1	M 1	M 3	M 3	M 3	M 3	3	M 3	M 3	1
South Vineland	6	3	3	F 1	F 1	F 2	F 3	F 3	M 3	F 1	M 3	F 1	6	M 2	M 2	1
Williamstown	4	1	3	M 1	M 1	M 1	M 1	M 1	M 1	M 1	M 1	M 1	4	M 1	M 1	1
Woodbine	9	8	1	F 1	M 1	M 3	M 4	M 4	M 8	F 1	M 1	M 1	9	M 1	M 1	2
Woodbury	80	23	57 F	F 1	M 4	M 8	M 11	M 1	M 1	M 22	M 1	M 1	80	M 1	M 15	15
Jersey City	31	7	24	F 1	F 1	F 1	F 2	F 2	M 24	M 13	M 1	M 1	31	M 1	M 1	1
New Brunswick	23	13	10	M 3	M 3	M 7	M 3	M 3	M 3	M 3	M 3	M 3	23	M 3	M 3	3
Hoboken	918	463	455	M 13	M 99	M 150	M 220	M 31	M 153	M 290	M 14	M 1	918	M 30	M 81	21
				F 2	F 7	F 79	F 128	F 227	F 16	F 381	F 23	F 1		F 35	F 30	30

THE SOCIAL ASPECT OF

Summary Table No. 3.

LOCALITY WHERE EMPLOYED.	Total number of children considered.	Parents Living. Number who have				BIRTHPLACE OF PARENTS. Number who were born in										
		Both.	Neither.	Father and no mother.	Mother and no father.	United States.	Ireland.	Germany.	England.	Poland.	Hungary.	Italy.	Holland.	Austria.	France.	Other Countries.
Bridgeton	52	34	2	2	14	51	--	1	--	--	--	--	--	--	--	--
Camden	27	16	3	2	6	26	--	1	--	--	--	--	--	--	--	--
Cape May Court House	29	13	1	2	4	20	--	--	--	--	--	--	--	--	--	--
Clayton	13	11	--	1	1	13	--	--	--	--	--	--	--	--	--	--
Glassboro	7	6	--	--	1	7	--	--	--	--	--	--	--	--	--	--
Gloucester City	19	5	1	1	3	10	--	--	--	--	--	--	--	--	--	--
Mays Landing	7	5	--	--	2	7	--	--	--	--	--	--	--	--	--	--
Medford	3	2	--	--	1	3	--	--	--	--	--	--	--	--	--	--
Millville	50	28	3	4	15	48	1	1	--	--	--	--	--	--	--	--
South Millville	33	23	--	1	9	30	1	2	--	--	--	--	--	--	--	--
North Millville	5	5	--	--	--	5	--	--	--	--	--	--	--	--	--	--
Minotola	5	3	1	--	1	--	--	--	--	--	--	5	--	--	--	--
Newark	266	177	5	6	78	96	60	70	24	1	7	3	--	--	1	4
Passaic	61	57	1	--	3	5	1	2	7	9	4	8	14	11	--	--
Paterson	188	160	5	3	20	39	55	18	35	--	--	25	10	--	6	1
Salem	14	8	--	1	5	14	--	--	--	--	--	--	--	--	--	--
Vineland	21	13	2	--	6	21	--	--	--	--	--	--	--	--	--	--
South Vineland	3	3	--	--	--	3	--	--	--	--	--	--	--	--	--	--
Williamstown	6	4	--	--	2	6	--	--	--	--	--	--	--	--	--	--
Woodbine	4	3	1	--	--	--	--	1	--	--	--	--	--	--	--	3
Woodbury	9	6	--	--	3	9	--	--	--	--	--	--	--	--	--	--
Jersey City	80	76	--	1	3	4	18	9	1	39	--	9	--	--	--	--
New Brunswick	31	28	--	--	3	5	5	--	2	14	--	--	--	--	--	--
Hoboken	23	17	--	1	5	1	6	2	0	1	0	13	--	--	--	--
	938	703	25	25	185	2	147	112	67	52	25	63	24	11	7	

Summary Table No. 4.

LOCALITY WHERE EMPLOYED.	Total number of children considered.	Education. Number who can			Number who have attended night school since beginning to work.	Moral surroundings while at work		Number who report having to stand continuously while at work.	Number who report their work of a kind which requires them to carry heavy loads.
		Read.	Write.	Cipher.		Number who report profane or obscene language used to them while at work.	Number who report that such language is used in their hearing.		
Bridgeton.....	52	51	46	50	1		16	25	
Camden.....	27	26	26	26				13	
Cape May Court House.....	20	20	19	20			9	15	1
Clayton.....	13	13	13	13			10	11	
Glassboro.....	7	7	6	7			7	3	1
Gloucester City.....	10	10	10	10				8	
Mays Landing.....	7	7	6	6				6	
Medford.....	3	3	3	3					
Millville.....	50	50	47	49	14		7	28	3
South Millville.....	33	31	19	28	27		23	12	
North Millville.....	5	5	5	5	3		2	2	
Minotola.....	5	3	1	1			5	2	
Newark.....	266	257	226	184	131			16	1
Passaic.....	61	58	50	41	18			12	
Paterson.....	188	187	178	167	138			115	
Salem.....	14	13	9	13			5	9	
Vineland.....	21	20	17	17			6	10	
South Vineland.....	3	3	3	2			1	1	
Williamstown.....	6	6	6	6			3	2	
Woodbine.....	4	3	3	2	1				
Woodbury.....	9	9	9	9			7	8	1
Jersey City.....	80	77	61	50	7			8	
New Brunswick.....	31	19	18	18	7			4	
Hoboken.....	23	10	10	9	7				
	938	888	791	736	354		101	310	7

The Negro in Manufacturing and Mechanical Industries.

For some years back the minds of thoughtful people have been drawn to a contemplation of the negro problem, particularly that phase of it which relates to the industrial outlook for the race, and the degree of success that has attended the efforts of its individual members to make a place for themselves in the great fundamental activities of life by the pursuit of which only, all races have succeeded in elevating themselves.

So important is this subject that a general conviction is growing everywhere in the nation, that a careful study of the conditions and needs of the negro population, a study absolutely removed from race prejudice and partisan bias, is necessary to the highest interests of both negroes and whites.

The twelfth census of the United States shows that the negro race is not dying out as many predicted it would, but that it is indeed increasing as fast as the white native born, and will continue to do so in the future so far as any hindrance to its growth now in view is concerned.

The nearly nine millions which forms the present negro population of the country, added to by the natural increase of nearly one hundred and fifty thousand a year, the gain shown to have taken place between 1890 and 1900, is, apparently, destined to be a part of the nation for all time.

The conditions surrounding this great number of human beings comprising about twelve per cent. of our total population, who are backward in, or utterly ignorant of, the arts and sciences which are the groundwork and main support of our civilization, is a matter that should not be guessed at, but investigated with a view to ascertaining all the facts, and, guided by the knowledge thus acquired, public interests demand that their development should be assisted in every possible way.

There is certainly a noticeable absence of negroes in the trades

requiring skill, and as it is from the ranks of workmen engaged in such labor that most, if not all, the successful organizers of great industrial enterprises are drawn, it would seem from their failure to obtain a footing in these advanced branches of labor, that the negro race has reached the limit of its capacity in the coarse and comparatively ill-paid work requiring only bodily strength, at which it is now almost universally employed.

This exclusion from advanced and gainful occupations, whether due to incapacity inherent in the race or to prejudice on the part of white workmen, or in part to both causes, is, while it continues, an effectual barrier to the negro's moral and industrial development.

Excellence in labor, industry, skill, perseverance, intelligence, thrift, ambition, and self-denial, are the means by which in a country of free opportunities like ours, men are constantly passing from the lowest to the highest strata of labor, and from the most restricted to the widest spheres of activity in the social and industrial life of the nation.

To inspire an individual or a race with the ambition that leads to high achievement, there must be an incentive in the form of prospective rewards and a clear course open in the path that leads upwards. If these are wanting, hope and ambition die and effort ceases to be directed to anything higher or more far-reaching than obtaining merely the things necessary to sustain life on the lowest animal plane.

The State has not neglected its duty to the negro race; since the emancipation it has provided liberally for their education, making no distinction in this respect between their children and those of the whites. Indeed, in many places special educational efforts directed toward meeting the peculiar requirements of negro children have been made, and although these extend backward over a full generation, it cannot as yet be said that the results reached satisfy the hopeful anticipations of their friends, or are commensurate with the efforts made on their behalf.

It may be said that with equal educational facilities enjoyed for so many years the negroes should make a better showing in the superior lines of employment, and that their failure to do so is due to racial incapacity for anything higher than the commonest forms of labor; that if they possessed the necessary mental qualifications, ambition to advance and a capacity for something better than menial work, they would, through their own exertions, have succeeded in

establishing themselves at least to some extent, in the superior grades of labor. But such reasoning would be superficial; it should be borne in mind that servile labor in its most extreme form—slavery, has been the lot of the negro race from the settlement of the continent up to forty years ago.

Unquestioning submission to the will of a master or an overseer was a primary law of the system, and it would be surprising indeed if the negro always accustomed to the guidance of others in all things had been able after more than two hundred and fifty years of an experience which involved a total effacement of independent thought on his part, to acquire in the little more than one generation which has elapsed since emancipation, the enterprise, power of initiative and mental vigor necessary for successful competition with the whites. A longer time should, in reason, be allowed for recovery from the timidity, which, from long subjection, has become an inbred characteristic of the race, and for the development of proper self-assertion and confidence before final judgment can be passed upon the capacity of the negro to take and hold a higher place than that now occupied by him in the industrial life of the nation.

But the question of practical importance which follows that of the negro's capacity to acquire a knowledge of the technique and practice of mechanical industry is, assuming that they can do so, will the managers of great industrial enterprises receive them into their shops and will the white mechanics who must always be greatly in the majority, consent to work with them; until that is settled in a manner favorable to the negro, industrial education will only fill his mind with delusive hopes which cannot be realized and make him discontented with the occupations he now follows, and in the pursuit of which he meets with little or no opposition on the part of the whites.

That this aversion to the negro and disinclination to collaborate with him exists among the whites there is no doubt, but there is also good reason to hope that as this dislike was based on the characteristics of the negro as he came fresh from chattel slavery, with but few human attributes beyond the form and speech of a man, it will weaken and finally disappear before a race transformed and humanized by the influence of education and the pursuit of industry.

The negro race forms a very important constituent group in the nation, and what they are able to make of themselves is a matter of profound importance to all. If they are to advance to the level of the general citizenship of the country it is necessary that they should

first of all earn a living ; to do this they must have the ability and will to labor effectively, and should receive enough for that labor to live decently and rear their children.

The future of the negro depends on his being naturally capable of qualifying himself to meet these requirements. If he can do so, the future is assured to him; although it may take a long time to bring about the change, the practice of industry, thrift, self-restraint and the development of the moral qualities that grow from an advancing and hopeful life, will finally remove such prejudice as may now be entertained toward him. But if he cannot rise, and that by his own efforts, then, indeed, is he apparently destined to be in freedom as in slavery, a being to whom the paths leading to big achievement are forever closed.

The question is one of the highest importance not only to the negro race, but to the entire nation. If the blacks are incapable of advancement, and cannot take a place in the currents which flow through industrial and social life of the nation, if so large an element of our population is destined to remain permanently in the lowest strata of labor without a hope that the lot of the son will ever be better than that of the father, we shall be confronted with a problem in social and political economy far more difficult of solution than any that has thus far confronted us since the beginning of our national life.

If the negro is capable of advancement it is in the highest degree a matter of interest to both races that no impediment be placed in his way. The workingmen should be especially concerned in seeing that he be given a free field and fair play; for the depth to which he may descend or be forced downward must ultimately become the same for the white laborer who competes with him.

The white population of New Jersey increased 27.8 per cent. from 1880 to 1890, and 29.8 per cent. from 1890 to 1900.

The increase shown by the negro population for the same periods was from 1880 to 1890 22.6 per cent., and from 1890 to 1900 46.6 per cent.

The negro population of the State by counties for 1880, 1890 and 1900, with the percentages of increase is shown in the following table:

COUNTIES.	1880.	1890.	1900.	Percentage of Increase 1890-1900.
Atlantic,	894	2,267	6,920	674.0
Bergen,	1,891	1,814	2,600	42.8
Burlington,	2,570	2,624	3,130	21.8
Camden,	5,687	7,475	8,583	51.2
Cape May,	570	861	869	52.4
Cumberland,	1,965	2,100	2,403	22.3
Essex,	4,727	6,910	12,559	168.2
Gloucester,	1,144	1,417	2,058	79.9
Hudson,	1,655	2,456	4,439	173.2
Hunterdon,	552	497	518	*6.1
Mercer,	3,230	3,467	4,152	28.5
Middlesex,	1,625	1,643	1,900	16.8
Monmouth,	3,461	5,074	6,907	99.5
Morris,	810	956	1,618	100.
Ocean,	98	153	270	175.5
Passaic,	1,077	1,125	1,949	80.9
Salem,	2,769	2,810	3,029	9.8
Somerset,	1,659	1,348	1,559	*6.
Sussex,	174	134	160	*8.6
Union,	1,939	2,202	3,854	98.7
Warren,	356	305	367	3.1
New Jersey,	38,853	47,638	68,844	76.9

*Decrease.

In the decade between 1880 and 1890 the increase of our negro population was 5.2 per cent. less than that of the whites, while during the ten years following, or from 1890 to 1900, the negroes increased to the enormous extent of 46.6 per cent., against 29.8 per cent. on the part of the white population.

This great accession of colored people is, of course, not due to natural increase, but to immigration from the South, the exodus of negroes from that section to the western, northern and eastern States having been from a variety of causes, particularly great during the past ten years. The increase of negro population from 1890 to 1900 shows a higher percentage in New Jersey than elsewhere, except in the far western and northwestern States or territories, to which places a relatively greater number have gone, attracted by the opportunities offered for farming or for employment as agricultural laborers. The less energetic of the race were those who came to the northern and eastern States, tempted to do so, probably, by the prospects of in some way making an easy living in the cities. At least that would seem to be the case in New Jersey, the foregoing table showing that the abnormal increase of the negro population has been in the counties having the largest towns, while in the agricultural counties that do not show a decrease only a slight gain, very much below that of the whites has taken place.

The negro's preference for the cities is natural because of the advantage which life in them offers compared with the agricultural districts. Many come because there are better schools to which they can

send their children for a longer period of time in the year than they could do in the country; their churches, too, and other forms of social association are attractive, and for many there is the alluring prospect of being able to obtain some kind of employment that will be easier and more remunerative than the drudgery of plantation or farm life. But, on the whole, this predilection is productive of unfortunate consequences. Without the ability to perform any kind of labor for which there is a demand, the negro soon loses such ambition as he had and becomes a competitor with others of his race for such chance jobs as most of them depend upon to eke out a scanty and precarious livelihood.

The want of steady employment produces the usual and inevitable results which would be no different if the individuals under consideration were white men instead of black; forced downward by the necessities of hand to mouth living; idle the greater part of the time; inhabiting tenements that are generally in the last stages of delapidation and decay; shunned by the whites, whose home lives might furnish a civilizing stimulus to him, it is not surprising that the city negro in his ignorance of all things relating to the serious problems of life, soon begins to retrace his steps on the short road that for him leads back to barbarism. Perhaps the demoralizing influence of this deplorable environment is best shown by a reference to the number of whites and blacks comprising the population of the State Prison at Trenton. At the date of this writing the total number of inmates of that institution was eleven hundred and thirteen; of these eight hundred and nineteen were whites and three hundred and twenty were negroes. Of the negroes two hundred and seventy-three were residents of New Jersey, who were convicted of crimes committed within the State, and forty-seven were convicts sent to the prison by Federal judges from the District of Columbia, Delaware and other places outside of New Jersey.

Excluding these latter and confining the calculation to negroes committed under State law, the astonishing fact is shown that these form *exactly twenty-five* per cent. of the population of the State Prison, while the entire number of the race resident in the State when the census of 1900 was taken constituted only *three and six-tenths* per cent. of its total population. If this state of things is brought about by unjust discrimination against the negro, because he is a negro, if his efforts to advance himself are nullified by prejudice, and he is forced into criminal paths through sheer hopelessness and despair, the

injustice to him and the shame to our civilization is infinitely greater than that which grew out of the old institution of legalized slavery.

To help to an understanding of the capacity of negro boys for skilled or semi-skilled employment the schools of the State in which manual training forms part of the course of instruction were appealed to for information with results that are given in the pages that immediately follow.

THE NEGRO IN MANUAL TRAINING SCHOOLS.

To appreciate the character and range of mental and manual activity sought to be developed in children by the system of training now established in our schools, it is necessary to understand that its purposes are not merely to teach the handling of tools and the making of things of utility but to train hand, eye and brain to skillful operation in the production of articles that will not only be useful but also pleasing to the sense of beauty; it seeks to develop such mechanical and artistic instincts as the child may possess; it instructs him how to make real things and to comprehend that in them which is useful and beautiful.

In these first lessons children of the white race have an immense advantage derived from a long ancestry familiar with the practice of art craft and handicraft. Race traditions and environment favor the development in them of a spirit of enterprise, self-reliance, confidence and commendable pride in the achievement of something, all of which makes the acquisition of knowledge a comparatively easy and pleasant task to children of average mental capacity.

With so much in their favor it seems only natural to suppose that the superiority of white over negro children who begin, it may be said, without any of these helpful influences, should be plainly apparent when they come together for instruction in the schools.

But the experience of teachers who have taught and are still teaching boys of both races is that such superiority is not definitely shown; that the aptitude for handling tools displayed by negroes is little, if any, below that of the average white youths pursuing the same lines of training, although the number of negro boys who take the manual training course is admitted to be too small to form the basis of a just comparison.

To ascertain the facts from those best qualified to speak on the subject, the following letter was addressed to the superintendents or principal teachers of all public schools in New Jersey having man-

ual training departments, with a blank, a copy of which follows the letter:

"Dear Sir: The Bureau of Statistics of New Jersey is desirous of making a study of the negro as an artisan with a view to showing the present standing of persons of that race in the mechanical and other industries requiring skill and training on the part of operatives.

"This study of the status of the negro as an artisan is for the purpose of determining whether he has at present a foothold as such and also to ascertain the attitude of employers and white mechanics engaged in the great industries toward his admission as a workman.

"As the inquiry will be directed in part toward learning something from authoritative sources regarding the negro's fundamental capacity for acquiring a practical working knowledge of mechanical arts on modern lines the opinions of instructors from whom many of them have received and are now receiving their first lessons in the use of tools would shed much light on this phase of the question and is earnestly solicited.

"The facts brought out by the inquiry we have in contemplation will very materially assist the work of manual training schools, and also do much, we hope, toward enlightening students of the negro race as to the prospects of being able to turn the knowledge they are striving to acquire to practical account in shaping their careers for the future.

"Accordingly, we take the liberty of requesting answers to the questions contained in the accompanying circular, which please return at your earliest convenience."

The questions on the circular were as follows:

1. Date of beginning manual training in the school.
2. Number of male pupils who have taken the course.
3. Number of these who were negroes.
4. Where selection is allowed what branches are mostly chosen by negroes.
5. Number of negro boys now being instructed.
6. How do negro students compare with white in the matter of aptitude in learning the use of tools.
7. Do you know of any negro boys trained in your school who are now employed at mechanical occupations.
8. Give your general observations on the character of negro boys and on their capacity for the acquisition of mechanical knowl-

edge. Whatever you may say will be regarded as confidential, if you so desire.

Twenty-nine of these circulars were sent out, that being the number of public schools in which manual training is a distinct part of the course of instruction. Eighteen answers were received, most of which contained the information requested in fairly comprehensive form.

The system of manual training has been established only during recent years, although a few schools had made a commencement as early as 1888. Instruction imparted now covers many of the wooden industries, such as turning, carving, cabinet making and carpentry, metal work; elementary plumbing and blacksmithing are also taught.

But little information is given as to the number of pupils who had taken the full course since manual training was established in the various schools; only a few of the instructors appear to have any records bearing upon the subject, or are able to state how many of the students were negroes. Four schools report having passed an aggregate of one hundred and fifty-three negro boys through the entire course of training since the system was first begun. Seven schools report one hundred and forty-three as the number now under instruction, and one, devoted entirely to the industrial training of negro children of both sexes, reports four males and twenty females as having taken the entire course and graduated from the school. This same institution reports having now under instruction fifty-seven negro boys who are being trained mostly in carpentry and iron work, and sixty-four negro girls who are being instructed in domestic science.

In answer to the question, "How do negro boys compare with whites in the matter of aptitude in handling tools?" such answers as are given make a favorable showing for the negroes, although there are a few instances in which the opinions expressed are not so complimentary to them. The following are the replies which are given just as received:

"Have but one negro boy now under instruction; he is very bright and keen."

"From my observation, negro boys compare favorably with white boys."

"In the matter of capacity for learning, there is little, if any, difference between the races."

"The average seems to be a little below the whites."

"The average fully up to the whites."

"Negro boys are slow in learning, but are very patient and finally are as successful as whites."

"Rather better than whites."

"Under the same conditions the aptitude of boys of both races is about the same."

In answer to the question, "Do you know of any negro boys trained in your school who are now employed at mechanical occupations?" the answers from all the schools with the exception of the one above referred to as being devoted exclusively to the industrial education of negroes is that they know of none. That institution is able to locate four of its graduates and reports them as being employed as follows: "One is in business in Philadelphia, one is taking an advanced course in carpentry at Pratt Institute, one is in a South Jersey institution taking an advanced course, and one is now employed as a teacher."

The opinions expressed by the instructors in the schools regarding the character of negro boys and their capacity for acquiring a knowledge of things mechanical are for the most part creditable to the race from both points of view. The instructors answer as follows: The first is from the manual training and industrial school for negro children exclusively:

"In my experience as teacher I have found that negro boys compare favorably with white boys in the acquisition of knowledge in general. Previous training, or rather lack of training, and environment have been against the negro's acquisition of mechanical knowledge. When these conditions are improved the negro boy will show the average aptitude in the matter in question."

I have spent some time at Hampton, Virginia, and have come to believe that as large a proportion of negro boys are mechanically inclined as of white boys: but probably there are fewer of exceptional ability. I am thoroughly convinced that hard training is of the greatest advantage to them, and liberal public expenditures is certainly justified for this purpose. I wish I might furnish you actual data. I shall be interested in learning the conclusion reached."

"I find that they like the work in the shops and seem to take it up as well as the whites. The commercial side of the sewing, cooking, etc., which is taught seems to appeal to them. The girls make good cooks; the boys are fairly accurate."

"Negro boys who take manual training as part of the grammar

school course, require a somewhat longer time to acquire skill, but seem greatly interested after they do acquire it." They do a good class of work. One negro boy of the sixth grade, 1903, has shown much interest in, and aptitude for original work, this is less usual with colored than with white boys."

"So far as I have observed, negro boys have done either remarkably good or remarkably poor mechanical work. There seems to be no medium workers among them. The bright boys have an especial aptitude for mechanical work, while there are a few who take no interest in it, and are hard to impress. Some of our best work in drawing, freehand and mechanical, is done by negro children. They appear to be very fond of the subject."

"I have always in the schools I have taught, been interested in the way negro boys take hold of tool work. At first they are more awkward and inefficient with tools than white boys, but their success in the production of good work gives them great pleasure and incites them to further effort. It has been my good fortune to have had some excellent workers from that class. In a school in which I taught that form of manual training not known as "sloyd", but which dealt with abstract or rather technical making of joints to gain efficiency with tools, a colored boy in one year's work attained better results than his white companions. The joints he made were as nearly perfect as could be desired. He returned to the South, and, of course, I cannot report results of continued effort. Negro children think slowly, but are patient, painstaking, and earnest."

"Since organization, we have had but two negro children, a boy and a girl, in our grammar and high school department. The boy graduated and is now in Cornell University, but did not take any manual training and did only fairly well in the experimental science laboratories. The girl has taken instruction in sewing and cooking and has done nice work. We have never exceeded one per cent. of negro children in our total enrollment."

"The negro, so far as my observation goes, lacks perseverance, is easily satisfied with his results, and is not easily held up to a high standard of work. My experience with them, however, has been so limited that it is hardly fair to make any general statement as to their capacity. There is one colored boy now in the eighth grade who is doing finely in the shops, but he is an unusually bright colored boy."

"Negro boys at twelve years of age are as far advanced physically as white boys at fourteen; mentally, they are equal at that age to

white boys of eight or nine. They acquire drawing, tool-skill, and basketry very fast. Given an industrial demand for their labor, the negroes will improve fast. Exceptions are striking in their orderliness, interest, and efficiency."

"Having had but one colored boy take the entire course, I am unable to make comparison between the pupils of both races. I may say, however, that the one pupil did very satisfactory work, and the one now taking the course is about the average of his grade."

"We have but one negro boy in the school; he is studying chemistry. The capacity of negroes for acquiring mechanical knowledge has not been tested here. They do not take to such a course. We have had but few negroes in the school, and all have been poor students. They do not like to apply themselves to study."

The foregoing opinions reflect the impressions of those under whose care and direction a large number of negro children have made their first attempt at learning to handle tools used in the skilled trades. The range of trades in which instruction is given in the schools is not very extensive, nor does the training go much beyond the mere rudiments in such handicrafts as are taught. There is not, therefore, the selection which would enable a boy to choose the work for which he might have the greatest liking and at which consequently he could accomplish the best results. He must take that which is offered or nothing.

Among the vastly greater number of white boys who take the manual training course, there is sure to be a number who have special natural aptitude for the craft or crafts which are the subject of instruction, and, as a consequence, their work is apt to excell that of boys who had not the same liking for it, but who could perhaps do equally well or better in some other line.

As stated above the proportion of negro boys in the total enrollment, is not above one per cent. The same proportion would probably hold good among the pupils who take the manual training course. If so, there would be in a class of one hundred boys, ninety-nine whites and one negro. Whatever the craft taught, there would surely be among the ninety-nine, many better fitted to follow it than any other trade, and who, if allowed a selection, would have chosen it in preference to all others; while the solitary negro boy might be much better adapted by natural capacity and inclination to do his best work at something else. It would be manifestly unfair under these circumstances to expect that his work should be superior to, or even

equal that which might be produced by some one among his numerous competitors.

The commendatory terms in which the teachers refer to the natural capacity of such negro boys as have come under their observation are, therefore, very encouraging. That their conclusions are reached by actual experience and without bias for or against the negro race is absolutely certain. On the whole, it may be said that so far as the small number attending New Jersey schools may be regarded as a fair basis for comparison, negro boys are not conspicuously inferior to whites in either a desire for instruction or the capacity to profit by it.

THE NEGRO ARTISAN BEFORE THE CIVIL WAR.

That the negro has the capacity to become an artisan is not a new proposition, but a fact well known all over the South where many hundreds of the race are now employed at skilled industries.

It would be safe to say that before the Civil War most of the mechanical work in the South was done by negroes either slave or free. The report of the Seventh Annual Conference of the Atlanta University says on the subject, quoting Bruce's *Economic History of Virginia in the Seventeenth Century* :

"The county records of the seventeenth century reveal the presence of many negro mechanics in the colony during that period, this being especially the case with carpenters and coopers. This was what might be expected. The slave was inferior in skill but the ordinary mechanical needs of the plantation did not require the highest aptitude. The fact that the African was a servant for life was an advantage covering many deficiencies."

Nevertheless, the report goes on to say that several large planters went to the expense of bringing from England handicraftsmen who were skilled in the very trades in which negroes belonging to these planters had been specially trained. This would seem to show that the planters held a low estimate of their slaves' knowledge of the higher branches of mechanical work.

Cooley's "Slavery in New Jersey" is authority for the statement that in this State, negroes were employed as miners, iron workers, saw mill hands, house and ship carpenters, wheelwrights, coopers, tanners, shoemakers, millers, and bakers, and at other employments requiring skill and judgment before the Revolutionary War, and

other colonial records show that in Pennsylvania as early as 1708, there were enough slave mechanics to make their competition severely felt by the freemen.

Ingle's "Negro in the District of Columbia" states that during the early part of the nineteenth century the number of negro artisans increased. "In the District were many superior mechanics; Benjamin Banneker the negro astronomer, assisting in surveying the District in 1791."

Olmsted, in his journeys through the slave states just before the outbreak of the Civil War, found slave artisans in all the states through which he journeyed. They worked in tobacco factories, ran the engines on steamboats, made barrels, etc. On a South Carolina plantation he was told by the master that "the negro mechanics exercised as much skill as the ordinary mechanics that he was used to employ in New England." In Alabama, Mr. Olmstead mentions having seen a negro carpenter who, he says, was a careful and accurate calculator and an excellent workman; this man was bought for Two Thousand Dollars. In Louisiana, he was told that master mechanics often bought up slave mechanics and with their labor carried on the business of contractors. An iron works on the Cumberland River was run for a time by slave labor contributed by the stockholders.

Further and very interesting light on the negro's standing as an artisan before the Civil War is furnished by an ex-Governor of a southern state in an article in the *North American Review* (156-472). It is quoted at considerable length in the report of the annual conference of the Atlantic University, and is in part as follows: "Prior to the war, there were a large number of negro mechanics in the southern states; many of them were expert blacksmiths, wheelwrights, wagon makers, brick masons, carpenters, plasterers, painters, and shoemakers. They became masters of their respective trades by reason of sufficiently long service under the control and direction of expert white mechanics. During the existence of slavery the contract for qualifying the negro as a mechanic was made between his owner and the master mechanic."

Such slaves were especially valuable and constituted a privileged class with a large degree of freedom. They were often hired out by their masters and sometimes hired their own time, although this latter practice was frowned upon as giving slaves too much freedom and nearly all states forbade it by law; although some, like Georgia, permitted the custom in certain cities.

In all cases the slave mechanic was encouraged to do good work by extra wages which went into his own pocket. For instance, in the semi skilled work of the tobacco factories, the Virginia master received from One Hundred and Fifty to Two Hundred Dollars annually for his slave and the employer fed him; but the slave by extra work, could earn for himself Five Dollars or more per month. So carpenters sometimes received as much as Two Dollars a day for their masters and then were given a chance to earn more for themselves.

In Texas nine slaves, some of them carpenters, were leased at an average of a little over Two Hundred and Eighty Dollars a year and probably earned something over this. If the mechanic was a good workman and honest the master was tempted to allow him to do as he pleased so long as he received from him a certain yearly income. In this way there arose in nearly all southern cities a class of negro clients free in everything but name; they owned property, reared families, and often lived in comfort. In earlier times such mechanics bought themselves and families and became free, but as the laws began to bear hard on free negroes, they preferred to remain under the patronage and nominal ownership of their masters. In other cases they migrated to the north and there worked out their freedom, sending back stipulated sums. Many, if not most of the noted leaders of the negro in earlier times belonged to this class, such as Vasey, Nat Turner, Richard Allen, and Absalom Jones. They were exposed to neither the corrupting privileges of house servants nor to the blighting tyranny of field work and had large opportunities for self-development.

Usually the laws did not hinder slaves from learning trades. On the other hand, the laws against educating slaves really hindered the mechanics from attaining any very great degree of efficiency; save in rare cases they had to work by rule of thumb usually.

North Carolina allowed slaves to learn mathematical calculations but not reading and writing; Georgia decreed in 1833 that no one should permit a negro to transact business for him in reading or writing. Gradually such laws became more severe—Mississippi, in 1830, debarred slaves from printing offices; and Georgia, in 1845, declared that slaves and free negroes could not take contracts for building and repairing houses, as mechanics or masons. Restrictions, however, were not always enforced and the slave mechanic

flourished. One obstacle, however, he did encounter from first to last and that was the opposition of white mechanics.

In 1708 the white mechanics of Pennsylvania protested against the hiring out of negro mechanics, and were successful in getting acts passed to restrict the further importation of slaves. Later, they protested again, and the Legislative Assembly declared that the hiring of black mechanics was "dangerous and injurious to the Republic and not to be sanctioned."

Especially in border states was opposition fierce. In Maryland, the Legislature was urged in 1837 to forbid free negroes entirely from being artisans; in 1844 a bill was reported to keep negro labor out of tobacco warehouses; in 1844 petitions came to the Legislature urging the prohibition of free black carpenters and taxing free black mechanics; and finally in 1860 white mechanics urged a law barring free blacks "from pursuing any mechanical branch of trade." any mechanical branch of trade."

Mississippi mechanics told Olmsted that they resented the competition of slaves and that one refused the free service of three negroes for six years as apprentices to his trade. In Wilmington, North Carolina a number of persons destroyed the framework of a new building erected by negro carpenters or mechanics. A public meeting was called to denounce the act and offer a reward. The deed was charged upon an organized association of one hundred and fifty workmen. There were similar disturbances in Virginia, and in South Carolina white mechanics about this time, were severely condemned by newspapers as "enemies to our peculiar institutions and formidable barriers to the success of our native mechanics."

In Ohio about 1820 to 1830 and thereafter the white mechanics' societies combined against negroes. One master mechanic, President of the Mechanical Association of Cincinnati was publicly tried by the association for assisting a young negro to learn a trade. Such was the feeling that no colored boy could find entrance as an apprentice, and few workmen were allowed to pursue their calling. Negro mechanics who had purchased their freedom in the slave states moved to the North; in many instances these were met by a prejudice so strong as to prevent their obtaining work. If one of them was employed as a mechanic, the white men struck and compelled his discharge. Many capable and earnest negro artisans could do no better under this hostility than work as common laborers until they could, by saving up, take small contracts and employ black labor to help them.

Enthusiastic testimony to the skill of the negro mechanics of ante-bellum days is borne by an artisan who learned his trade from one of them; writing to the Atlanta University on that subject, he says:

"The slave owners early saw the aptitude of the negro to learn handicraft, and fully appreciating what vast importance and value this would be to them (the masters) selected their brightest young salvemen and had them taught in the various trades. Hence on every large plantation, you could find the negro carpenter, blacksmith, and brick and stone mason. These trades comprehended much more in their scope than they do now. Carpentry was in its glory then. What is done now by varied and complicated machinery was wrought then by hand. The invention of the planing machine is an event within the knowledge of many persons living to-day.

"Most of our wood working machinery has come into use long since the days of slavery. The same work now done by machinery was then done by hand. The carpenter's chest of tools in slavery times was a very elaborate and expensive outfit. His kit not only included all the tools that the average carpenter carries now, but also the tools for performing the work now done by the various kinds of wood working machines. There is little opportunity for the carpenter of to-day to acquire or display genius and skill at his trade as could the artisans of old.

"One only needs to go down South and examine hundreds of old Southern mansions and splendid old church edifices, still intact, to be convinced of the fact of the cleverness of the negro artisan, who constructed nine-tenths of them, and many of them still provoke the admiration of all who see them, and are not to be despised by men of the present day.

"There are few, if any, of the carpenters of to-day, if they had the hand tools, could get out the "stuff" and make one of these old style massive panel doors—who could work out by hand the mouldings, the stiles, the mullions, etc., and build one of those windows which are found to-day in many of the churches and public buildings of the South; all of which testifies to the negroes skill as an artisan in the broadest sense of the term.

"For the carpenter in those days was also the cabinet maker, the wood turner, coffin maker, pattern maker, and generally the maker of most things made of wood.

"The negro blacksmith held almost absolute sway in his line, which included the many branches of forgery, and other trades now

classified under different heads from that of the regular blacksmith. The blacksmith in the days of slavery was expected to make any and everything wrought of iron. He was to all intents and purposes the machine blacksmith, horse shoer, carriage and wagon ironer and trimmer, gunsmith, and wheelwright; he often whittled out and ironed the haines, the ploughstocks, and the singletrees for the farmers, and did many other things too numerous to mention.

"They were experts in tempering edge tools by what is known as the water process, but many of them had processes of their own for tempering tools which they guarded with zealous care."

Before the Civil War there were many negro machinists in the South. The slave holders were generally the owners of the factories, machine shops, saw mills, and other establishments requiring skilled labor of that kind. They, also, owned all the railroads and the shops connected with them. In these places the slave mechanic and laborer had almost entirely supplanted the white workmen at the time the great conflict broke out. Many of the railroads had entire train crews except the conductors made up of slaves—including engineers and firemen. Had the war not resulted in emancipation, white mechanics and laborers in the South would have been completely ousted in time by the slaves whom the masters were having trained for their positions.

While the poor whites and masters were at the front fighting the negroes were at home doing the work necessary for their support in the field. They were in the gun factories making arms and in the various shops turning out wagons, harness, saddles, and bridles for the army; and in fact they were doing every variety of work required for the public service in war, as well as everything appertaining to the ordinary requirements of private life; absolutely every white man physically capable of bearing arms, being then in the ranks of the army.

The same authority quoted above concludes his recollections of the old time negro artisan as follows:

"Much has been said of the new negro of the new century, but with all his training he will have to take a long stride in mechanical skill before he reaches the point of practical efficiency where the old negro of the old century left off.

"It was the good fortune of the writer once to fall into the hands of an old uncle who was master of what would now be half a dozen distinct trades. He was generally known as a mill wright or mill

builder. A mill wright now is only a man who sets up machinery, shafting and belting. In the days of slavery, the mill wright had to know how to construct everything about the mill, from foundation to roof. This man could take his men with their 'cross cut saws' and broad axes and go into the forests, hew the timbers with which to build the dams across the rivers and streams of water, to erect the mill house frames, get out all the necessary timber and lumber at the saw mill. Then he would without a sign of a drawing on paper, lay out and cut every piece, every mortise and tenon, every brace, and rafter with their proper angles, etc., with perfect precision before they put the whole together. I have seen my uncle go into the forest, fell a great tree, hew out of it an immense stick or shaft from four to five feet in diameter, and from twenty to thirty feet long, having as many as sixteen to twenty squares on its surface, or as they termed it, 'sixteen or twenty square.' He would then take it to the mill seat and mortice it, make the arms and all the intricate parts for a great 'overshot' water wheel to drive the huge mill machinery. This is a feat most difficult even for modern mechanics who have a thorough knowledge of mathematics and the laws of mechanics.

"It is difficult for us to understand how these men with little or no knowledge of mathematics or mechanics could take a crude stick of timber, shape it, and then go to work and cut out a huge screw and the 'tap blocks' necessary for these old style cotton presses."

Enough is shown to prove that negroes could master the mechanical arts of the old days, and that a large proportion of the work of that kind required in the South had been done by them before emancipation had destroyed the labor system of that section of the country and prepared the way for the industrial South.

With the dawn of the new era came improvements in the manner of doing work which had been for years in vogue in the North and with them came the white workmen. Negro artisans were but poorly equipped to meet such competition. He knew how to work only by rule of thumb for he had never been trained otherwise, but was accustomed to having the guidance and protection of an intelligent and influential white master. The new industrial development was slow of growth and for some years after the close of the war the negro artisan still held his own; but the time finally came when crushed by the many disadvantages under which he labored, the black workman was forced to accept low wages and submit to practical self-effacement, so far as social protection was concerned. But even this

was not sufficient to enable him to hold his place; the progress of the industrial movement demanded a higher order of skill than he possessed, and in the nature of things he had no means of acquiring it. His white fellow workman only could teach him, and that he would not do because of strong race prejudice and resentment against the negro for working for lower wages. Apprenticeship to the older negro mechanics did little or no good, for they were themselves but little less ignorant of that which was wanting; they could not teach what they had never learned. In fact, it was only through the policy of accepting low wages that the negro succeeded in securing any share of work under the new order of things. By that means he was enabled to occupy places that otherwise would have been filled by white labor; but for the time being at least, this course increased the enmity toward him of his white fellow workers. The especial weakness of the ex-slaves was that his training as an artisan extended only to doing work and not to seeking or marketing it when done. His trade had been learned because his master willed it and he worked wherever ordered to do so, not troubling himself at all about wages which was entirely the concern of the master, so that even if he had possessed equal skill, the white mechanic's prestige of race, free from the taint of servility, coupled with his general intelligence and his knowledge of the demand and the market for his labor, constituted an advantage which foredoomed the negro's competition to failure.

The position of the negro in the South was made still worse by a bad class of politicians, black and white; these succeeded in persuading him that the path to real freedom lay through the acquisition of political power. The prejudice thus stirred up all over the South against the reconstruction negro voter, inevitably resulted in intensifying general hostility to him on social and industrial lines.

In time this feeling was greatly weakened if not entirely removed, and negro workmen in the South are now making their way with comparatively little opposition, into such occupations as they may be fitted for. But as yet the number that have got into the trades or other forms of mechanical industry is very small indeed. The great bulk of the negro population of the South is still to be found on the plantations or employed in some form of personal or domestic service.

With the testimony of the manual training instructors in favor of negro boys having the capacity to learn the elementary principals

at least of such crafts as are taught in the schools, supplemented as it is, by the creditable record of the negro artisan in the South for many generations before the Civil War, no reasonable ground remains for doubting the fitness of the race for successfully following many of the industries requiring some degree of skill.

Under these circumstances a fair proportion of negroes should be found in the factories and workshops, if not in the higher grades of labor, at least working at something above the very lowest. Failure to find such employment can be charged only to lack of enterprise, self assertion, or perseverance on their part; or else to the existence of prejudice against them on the part of employers or the unions of white workmen too strong to be overcome.

To ascertain what foothold the negroes have at present in factory and other forms of skilled employment, a blank containing the following questions was sent to a selected number of representative establishments engaged in each of the chief industries carried on in the State:

1. Total number of employees.
2. Total number of negroes employed, if any.
3. How many of the negroes are skilled or semi-skilled workmen.
4. What kind of skilled work is done by negroes.
5. What wages do negro workmen receive per week.
6. Are negroes paid the same wages as white men for the same kind of work?
7. How do negroes compare in efficiency with white men on the same kind of work?
8. Do negroes improve in efficiency?
9. Have the negro workmen received any education or are they totally illiterate?
10. Shall you continue to employ negro workmen?

These circulars were mailed to the proprietors or managers of four hundred and seventy-five manufacturing establishments representing eighty distinct industries. The plan followed was to make a thorough canvass of such occupations as from the reports received were shown to have negroes among their employees. In such cases blanks were sent to every other establishment engaged in the same industry with a view to learning if negro labor was general among them. If on the other hand, the experimental blanks sent to a given industry came back without showing that some negroes were employed, it was assumed that further inquiry in that direction would

be useless; in a word the lines that were shown by the inquiry to lead to where black men were employed were followed up to the end, and all others abandoned.

As stated above the inquiry blank was sent to four hundred and seventy-five establishments including all the largest ones in each of the principal industries. Three hundred and ninety-eight were returned with all the questions satisfactorily answered. The aggregate number of persons employed in these establishments was 128,412, a number considerably in excess of fifty per cent. of the total employed in all kinds of manufacturing in New Jersey. It was found that only eighty-three establishments out of the total number reporting employed negro labor in any capacity. Two hundred and ninety-two reported no negroes at work in any branch of their business.

The aggregate number of persons of both races employed in the eighty-three establishments reporting negro labor is 38,364. There were nine hundred and sixty-three negroes among these, of whom only two hundred and thirty-four were either skilled or semi-skilled workers. The remaining seven hundred and twenty-nine were common laborers, stablemen, or team drivers.

The total number of employees and the proportion of negro workmen with the weekly wage rates of the latter, are given in the following table:

Number, Relative Proportion and Weekly Wages of Negro Workmen Employed in Eighty-three Manufacturing Establishments.

NEGRO IN MANUFACTURING INDUSTRIES.

73

Office Number.	INDUSTRY.	Total Number of Persons Employed.	Negro Workmen.			Wages Paid per Week to Negroes.	Are equal wages paid to Negroes for the same work? Yes-No.	
			Number who are Skilled.	Kind of Skilled Work Done.	Percent- age of Negroes.			
			Number whose work does not require skill.	Total number of Negroes.	Whites.	Negroes.		
1	Manufacture of brick and terra cotta.....	230	69	Brick machine operators and firemen.....	69	138	40	\$5-\$10.50 Yes
2	Manufacture of brick and terra cotta.....	185	18	2 Engineers.....	18	20	89.2	10.8 Yes
3	Manufacture of brick and terra cotta.....	55	39	6 Brick burners and captains of sailing craft.....	39	45	13.2	81.8 9.25 Yes
4	Manufacture of brick and terra cotta.....	50	10	.....	10	10	80	20 9-10.50 Yes
5	Manufacture of brick and terra cotta.....	60	30	.....	30	30	30	60 9-10.50 Yes
6	Manufacture of brick and terra cotta.....	30	23	3 Setting brick in kilns.....	23	23	23.4	76.6 8-10.00 Yes
7	Manufacture of brick and terra cotta.....	65	2	2 Sand molds and set brick.....	2	4	93.9	6.1 10.50-12.00 Yes
8	Manufacture of brick and terra cotta.....	125	1	.....	1	1	99.2	.8 7.50 Yes
9	Manufacture of brick and terra cotta.....	65	10	Not reported.....	10	84.6	15.4	8.10-12.00 Yes
10	Manufacture of brick and terra cotta.....	250	1	Locomotive engineers.....	1	1	99.6	.4 18.00 Yes
11	Manufacture of brick and terra cotta.....	115	4	.....	4	4	96.5	3.6 7.50 Yes
12	Manufacture of brick and terra cotta.....	30	5	.....	5	5	96.4	3.6 8-10.50 Yes
13	Manufacture of brick and terra cotta.....	50	7	Clay machine operators.....	7	76.7	23.3	9.00-14.00 Yes
14	Manufacture of brick and terra cotta.....	65	3	.....	3	91	6	10.50 Yes
15	Manufacture of brick and terra cotta.....	175	61	.....	61	90.8	9.2	10.50 No
16	Fruit and vegetable canning.....	65	40	.....	40	77.2	22.8	7.50-9.00 Yes
17	Carriage and wagon building.....	36	2	.....	2	94.5	5.5	8.00 Yes
18	Chemical manufacture.....	26	3	Firemen and running extractors.....	3	88.5	11.5	9.00-11.00 Yes
19	Chemical manufacture.....	268	3	.....	3	98.9	1.1	10.00 Yes
20	Chemical manufacture.....	760	1	.....	1	97.8	2.2	9.00-10.00 Yes
21	Chemical manufacture.....	903	19	.....	19	97.8	2.2	9.00-10.00 Yes
22	Cotton dyeing.....	733	1	Runs washing machine.....	1	99.9	.1	6.00 Yes

Number, Relative Proportion and Weekly Wages of Negro Workmen Employed in Eighty-three Manufacturing Establishments.

Office Number.	INDUSTRY.	Total Number of Persons Employed.	Number who are Skilled.	Negro Workmen.		Percent- age of	Wages Paid per Week to Negroes.	Are equal wages paid to Negroes for the same work? Yes—No.			
				Whites.	Negroes.						
									Number whose work does not require skill.	Total number of Negroes.	
23	Electrical appliances,	1,000	1	1	Running a drill press,	30	97.	3.	9.00—15.00	Yes	
24	Fertilizers,	147	1	1	Operate weighing and bagging machines,	16	27	81.7	18.3	7.50—10.00	Yes
25	Food products,	136	1	1	.....	2	98.5	1.5	8.00	Yes
26	Food products,	115	1	1	.....	3	97.4	2.6	12.00—16.00	Yes
27	Food products,	123	1	1	Solders caps on cans,.....	1	2	98.4	1.6	7.50—9.00	Yes
28	Food products,	390	1	1	Cutting up meat,	8	97.7	2.3	9.00—12.00	Yes	
29	Foundry (iron),	250	1	1	.....	2	99.	1.	9.00—10.00	Yes
30	Foundry (iron),	600	3	3	Not reported,	1	99.2	.8	7.50	Yes	
31	Furnaces, ranges and heaters,	165	1	1	.....	2	98.8	1.2	8.10—10.50	Yes
32	Glass,	193	1	1	.....	60	68.9	31.1	7.00—8.00	Yes
33	Glass,	510	1	1	.....	20	96.1	3.9	7.00—12.00	Yes
34	High explosives,	230	1	1	.....	8	96.5	3.5	10.50—12.00	Yes
35	Knit goods,	400	1	1	.....	1	99.8	.2	3.50	Yes
36	Lamps (patented),	700	1	1	Not reported,	1	99.9	.1	10.00	.....
37	Leather,	220	1	1	.....	1	99.8	.2	12.00	Yes
38	Leather,	220	1	1	.....	1	99.5	.5	6.00	Yes
39	Leather,	120	1	1	.....	1	99.2	.8	9.00	.....
40	Leather,	450	1	1	.....	2	99.6	.4	10.00	Yes
41	Lime and cement,	100	30	30	Cooperage, carpentering and painting,	25	45.	55.0	9.00—18.00	Yes	
42	Lime and cement,	652	5	5	Not reported,	5	99.2	.8	7.50	Yes	
43	Lime and cement,	700	1	1	Kiln tender,	1	99.9	.1	15.00	Yes	
44	Lime and cement, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....

A scrutiny of the list of skilled occupations given in the foregoing table shows that most of the negroes are engaged as machine tenders or at other duties, that, while much above hard manual labor, are still classifiable as skilled, only under a very liberal interpretation of the meaning of that term, and because their employers have themselves reported them in that way: only in a comparatively few instances are the wages paid on a par with those of the average skilled white workman.

The industry in which negro workmen appear to have the best foothold is the making of brick and terra cotta. In the fifteen establishments reporting, the total number of persons employed is 1,513; of these 307 or 20.3 per cent. are negroes: in four of them the percentage of negro employees is 81.8; 76.6; 60.0; and 50.0 respectively. Several others show proportions of their working force who are of the colored race, ranging from ten to twenty-three per cent.

One establishment manufacturing lime and cement employs fifty-five negroes out of a total of one hundred employees. Thirty of these men are working as coopers, carpenters or painters, the remaining twenty-five are laborers.

The opinions expressed by owners and managers of industrial establishments on the subject of negro labor which follow, are interesting and important; reflecting as they do the impressions of broad minded men of affairs, based on experience in organizing and managing large forces of labor. Almost without exception it will be found that the spirit running through these communications is tolerant and kindly, showing no trace of prejudice and advancing only such objections to the negro workman as are entirely in his power to overcome.

One firm of cornice and skylight manufacturers who formerly employed negroes says of them as workmen:

"We do not care for them, because they are not reliable; at least that has been our experience. We had quite a number in our employ at one time; they can be trained to do good work, but they cannot be depended upon. At least, that is the conclusion we have come to after having had many of them in our employ for several years."

A firm of food canners writes of negro labor as follows: "We do not employ negroes in our factory but have some of them on a farm where they are paid the same wages as whites, viz: \$1.50 per day. We prefer white help because they are more intelligent as a rule; our experience with negroes is that they stay away from and

neglect their work for very trivial reasons. They are not ambitious and do not try to better their condition. We have succeeded in keeping some good negro help by weeding out the trash. During the packing season in the Fall we employ about fifty men, ten of whom are negroes. They do the rough work, such as scalding tomatoes, etc., and are as good at it as white men, but not so reliable. They are apt to remain away without notice. We employ a few negro women to peel tomatoes; their work is very satisfactory as they are very painstaking, but they are slow; earning about \$1.00 per day to the \$1.50 and \$2.00 earned by white women, who, however, do poorer work in consequence of their greater speed. Our experience hardly affords material for a fair comparison, as we draw our colored help from a class that used to be connected with the business of horse racing up to the time Monmouth Park was closed. These people had to find other employment after racing was discontinued."

A leather manufacturer writes: "We employ no negroes simply because we have never received an application for employment from one of that race."

A manufacturer of leather goods says: "I do not employ negro labor hence can say nothing regarding their quality as workmen. If I had work at which a negro could be used, I most certainly would give it to him—no good reason why I should not."

A manufacturer of metal goods says: "We have never employed negroes for our work. Do not think there are any mechanics of that race in our line. We require skilled labor altogether."

A pottery company: "We have never employed negroes in our line. For some unknown reason they do not appear to have ever sought employment in pottery manufacture, at least not to our knowledge."

A manufacture of sash, doors, and blinds: "I do not employ any negroes at present. I have tried them as drivers and found them very good around horses, but in general very lazy. This laziness seems to increase with age."

A company engaged in the manufacture of paints and varnish writes: "We do not at present, nor have we at any time, employed negroes. We have no particular objection to negroes, and have no reason for their non-employment other than that they have never made application for work."

A manufacturer of metal goods writes: "We have no negroes

in our employ but do not object to them. If we should refuse to employ them it would be solely to avoid the risk of friction between them and white workmen. But we have never had an application for work from a negro, and cannot say now what we should do if one were to apply."

A manufacturer of tools and hardware: "We have no negroes in our employ, not from any prejudice on our part, but we do not think our men would make it agreeable for them. This we believe to be the reason why negroes do not enter the field of skilled mechanics."

A manufacturer of boilers says: "We never have, nor should we ever employ negroes such as are to be found in this quarter."

A brick manufacturer: "Have no negroes employed at our works and have made no attempt to use negro labor. We prefer white foreign help such as Hungarians, Polanders, etc."

Manufacturers of terra cotta: "Our work is done by skilled white mechanics; we have not and do not intend to introduce negro labor, believing that they never could be trained up to taking the places of white men in skilled labor."

Brick manufacturers: "We employ no negro workmen and have no intention of ever doing so."

Brick manufacturer: "We employ no negroes in our works. Do not regard them as being equal to white men in our business."

Art tile manufacturers: "We have never employed negro labor."

Manufacturer of food products: "There is no department of our works where negroes could be employed advantageously."

Manufacturers of hats: "We do not employ negroes in the hat manufacturing business; do not believe they could be trained to do the work."

Manufacturer of leather: "We employ no negroes, principally because none have ever applied to us for work. There are no negroes in the vicinity of our works."

Shoe manufacturers: "Very few, if any, negroes, are employed in this business; but there is no special reason that we know of for their exclusion."

Shoe manufacturers: "Have never tried them except to drive teams or do laboring work around the yard. Our white employees would object to working side by side with negroes."

Shoe manufacturers: "We have no negroes in our employ because there is a strong prejudice against them. Think, however, it would be better to employ them than to encourage them to steal by keeping them in idleness."

Watch case manufacturers: "We do not employ negroes in any capacity, except as porters and laborers."

Manufacturers of veneering: "Should be glad to employ some of them, but none have ever applied for work and none are living in our vicinity."

It will be noticed that only a comparatively few of the employers quoted above declare themselves opposed to negroes as workmen on grounds arising from experience with them in that capacity. Those who write against them in positive terms, do so for the most part on the assumption that, as a matter of course, white employees would revolt against working side by side with negroes.

"Laziness" and "unsteadiness at work" are the most serious shortcomings specifically urged against the race, in the opinions given by employers, who now have negro workmen or have had them in the past. Only a few intimate rather than plainly express a disbelief in the negro's ability to acquire such skill in mechanical occupations as to ever make him a desirable workman. But how far one or even a greater number of employers in a given industry may fall short of accurately expressing the sentiments of all is shown by the fact that while four manufacturers of brick and terra cotta declare that negro labor would not do in their business, and that none had been or ever would be employed in their several establishments the table of occupations in which negroes are employed shows that in fifteen establishments engaged in the same industry men of that race are now employed in large numbers, and, presumably, giving satisfaction.

On the other hand, a number of manufacturers engaged severally in the leather, leather goods, pottery, paint and varnish, and veneering industries, while reporting no negroes in their establishments, declare that the only reason for not having them is that none have ever applied for employment.

It would seem from the foregoing that the doors of workshops in which skilled labor is performed are not hopelessly closed against the negro; that, in fact, in many of them now men of the race who come properly equipped for work will be welcomed, and in others at least tolerated until time and their own efforts to attain the white man's standard in skill, morals and education shall produce a change before which mere color will be forgotten as a cause of friction.

The attitude of labor organizations toward the negro as a workman was the next question to be considered.

If the unions were found to be hostile and opposed to his admission

to membership the negro's efforts to secure a foothold in the skilled industries would meet an opposition very difficult to overcome, and one that would in all probability long delay the fulfillment of his hopes. If, on the contrary, the unions were not unfriendly, the negro's progress would be made much easier; he could depend on being treated fairly in the shops by the men who had admitted him to equal rights as a member of their union, and his sense of self-respect would grow out of the consciousness of possessing and sustaining equal rights and responsibilities in the regulation of trade interests with his white fellow-craftsman.

With a view to ascertaining just what stand organized labor has taken on this question of supreme importance to the negro race a circular containing a few questions relating to the subject was addressed *to all* the international, national, State, and central labor unions in the United States that were under the jurisdiction of the American Federation of Labor. The addresses of the officers of these bodies were secured through the courtesy of Mr. Frank Morrison, general secretary of the Federation. The following are the answers received:

STATEMENT OF OFFICERS

of the National and International Trades Unions regarding their attitude toward the Negro in Industry..

United Brotherhood of Carpenters and Joiners of America.

"Have a large number of negro carpenters affiliated with the United Brotherhood. Some are members of unions with white men, but the majority are in organizations composed only of negroes. These latter are altogether in the South.

"The regulations governing the admission of members makes no distinction between whites and negroes."

International Association of Metal Trades Mechanics.

"Members are under an obligation not to discriminate against any one on account of race, color or creed.

"Have some few negroes scattered through the various locals with white men. There is one organization of our craft in Savannah, Ga., composed entirely of negroes."

Wood, Wire and Metal Lathers' International Union.

Makes no distinction between negro and white workmen. "A negro has the same privileges in the union as a white man. If found to be competent workmen they are admitted to any local of the organization."

Watch Case Engravers' International Association of America.

There are no local unions of Watch Case Engravers in New Jersey. "There is only one negro watch case engraver, and he is the only one that so far as I know has ever worked at the trade. Our regulations do not bar them, but negroes do not seek employment at our trade. The man referred to is the sole exception and there may never be another."

Interior Freight Handlers and Warehousemen.

The secretary of this union says: "I wish to state that we have over 400 negroes in our organization. We find them good workmen and as true to their obligations as the average white man.

"They are admitted to and take part in the business of meeting on terms of perfect equality with white members.

"Some of our locals are partly officered by negroes. This is the case particularly in East St. Louis, Ill."

National Alliance of Bill Posters and Billers of America.

"We have no locals composed entirely of negroes, but have a few individual members in our organization who are in locals with white men. Have never heard of any objection having been made to them. There is no color line in our union and negroes who are competent workmen are eligible to membership in any of our locals.

"The theory on which our regulations are based is that all men are equal and entitled to the same privileges, irrespective of race or color."

Tobacco Workers' International Union.

"We have many negro members, but they are mostly, if not altogether, employed in the South. Although our constitution makes no

difference between the races, where there are large numbers of both employed in a factory, we find it better that men of each should have a union of their own, and we usually organize them that way."

International Stereotypers and Electrotypers' Union.

"There are several negroes working at the business, and I think they are admitted to our unions when it is found they have served the required term of apprenticeship and are otherwise qualified for membership.

"We have no laws, regulations or rules which in any manner relate to or discriminate against the negro."

International Association of Glasshouse Employees.

"There are no locals of our trade in New Jersey, but in St. Louis, Mo., and Belleville and Steator, Ill., there are many negroes working at our trade, and they are admitted to the organizations of the craft on terms of perfect equality with white workmen. Our constitution contains a provision which prevents discrimination on account of color or nationality."

International Brick, Tile and Terra Cotta Workers' Alliance.

"There is no discrimination against negroes permitted by the constitution of the organization. So long as they are honest and upright and are able to do the work they are taken into the locals on the same terms as white men.

"There are a number of local unions composed almost entirely of negroes, and these seem to get along with as little friction as organizations made up entirely of white men."

"There was a time not very long ago when employers used colored men as strike breakers, bringing them from remote distances to take the places of white men who were on strike for better conditions, but in almost every instance where such a move was made the negroes refused to take the places of strikers; therefore the feeling in our organization is very kindly toward them."

International Glove Workers' Union of America.

"The constitution of the organization and the obligation subscribed to by those who become members both forbid anything in the nature

of discrimination against any man on account of race, creed, or color.

"A local union of this organization in Johnstown, N. Y., has two negro members who are skilled block cutters. None others of the *colored* race are known to be employed at glove making at the present time."

Ceremic, Mosaic and Tyle Layers' Union.

Has negroes in the union. Two in New York. Does not seem to be any discrimination against them.

Bakers' and Confectioners' International Union.

"A considerable number of negroes are now working at the trade, most of them in the South. The negroes in that section of the country are fairly well organized. In Savannah, Ga., there is a local composed entirely of negroes, although there are many in the organizations with white men. Unions are strictly enjoined not to reject a negro if he apply for membership and is qualified."

Glass Bottle Blowers' Association.

"Have no law in the organization against the reception of negroes as members. The trade is one requiring a very high degree of skill and has also the disagreeable feature of being associated with hot furnaces. Negroes do not as a rule become highly skilled in any calling, and are not partial to hard work; hence, there are no negroes employed in our industry at any of the skilled branches."

National Association of Machine Printers and Color Mixers.

"Have no negroes working at the trade in New Jersey or elsewhere, so far as known by the secretary."

International Steel and Copper Plate Printers' Union.

"No negroes work at the trade of plate printing. There are no laws of the union which would prevent their membership providing they had served a regular apprenticeship."

Amalgamated Association of Street Railway Employees.

"Do not know of any negroes working at the business in New Jersey."

Window Glass Snappers.

Secretary writes: "I am positive that there are no negroes working at our craft anywhere. They would not be admitted with white workmen on account of race antagonism, although rules and constitution of the order are against discrimination upon any grounds."

Railway Telegraphers.

"So far as known, there are no negroes working as railroad telegraphers. There are none of them in our union, and none would be admitted, as the rules make negroes ineligible."

Stove Mounters' International Union.

"Have no negroes working at the trade except some in Chattanooga, Tenn. Have no negro members of unions, although the law does not prohibit their admission."

Retail Clerks' International Protective Association.

"Have no negroes in the organization or working at the industry so far as is known."

United Hatters of North America.

Secretary writes: "Have never heard of negroes working at the hatting trade. The hatters' unions have never made any rules or regulations in reference to negroes. There has never been any necessity for it, as no negro has ever applied for admission. The only negro I have ever seen working in a hat factory was working as a laborer helping to color black hats."

International Association of Marble Workers.

"There are no negroes employed at any of the branches of the trade in Newark City who are members of the Union. Elsewhere there are large numbers of them, and they are admitted to all locals on the same terms as the whites.

"A majority of the negroes work in the finishing department, and there are many in the quarrying districts of Knoxville and in Georgia."

Piano and Organ Workers' International Union of America.

"No negroes employed in the manufacture of pianos or organs, but under the laws of our organization negroes, if otherwise qualified, are eligible."

The Saw Smiths' International Union.

"No negroes working at the trade anywhere, so far as known."

Amalgamated Rubber Workers' Union.

"No negroes employed in the rubber industry. There are no laws in the union excluding them from membership. The union makes no discrimination on account of race, nationality, color or creed."

National Brotherhood of Operative Potters.

"No negroes working in any of the departments of potteries where skill is required. Their employment as laborers is quite common."

International Brotherhood of Electrical Workers.

"Do not allow negroes to become members of the brotherhood. A few of them are working in the Southern States as electricians, but they are not connected with any labor organization."

Trunk and Bag Workers' International Union.

"No negroes working at the trade; nothing in the constitution and by-laws, however, to prevent their becoming members."

Machine Textile Printers' Association of America.

"No negroes working at the trade. The question of admitting them has never been considered. It is a very rare thing to hear of a negro working in a print works."

Journeyman Tailors' Union of America.

"The constitution and laws of the union raise no barrier against the admission of men to membership on account of race, nationality, creed or color."

"There are some negro tailors in the South who work among people of that race, and a few in the North; some of these are members of the union and of the same locals as white tailors.

"There have been instances, however, where they have been refused admission to membership, but the cases are rare where they have ever applied."

Pattern Makers' League of North America.

"Know of no negroes who are pattern makers, but have heard that in the Southern States there are a few working at the trade."

Boot and Shoe Workers' Union.

"Makes no distinction between race, creed, color or sex. Every person, male or female, actively engaged in our craft who is over sixteen years of age is eligible to membership.

"There are not many negroes working at the shoe craft, yet there are some. There are comparatively few negro members, and no local unions composed entirely of shoe workers."

International Longshoremen, Marine and Transportation Association.

"Have many negro members throughout the country; some in mixed locals, and many in separate unions by themselves. On the Mexican Gulf coast there are many of these organizations, and the members are enjoying prosperous conditions. The union has no rules restricting the privileges of negroes."

International Shingle Weavers' Union.

"Have no rules or laws that discriminate against the negro.

"Do not know of any men of that race now employed at the trade.

"Shingle weavers have to work very hard to earn good wages, and negroes, as a rule, do not care to exert themselves beyond what is absolutely necessary to make some kind of a living.

"In some of the shingle mills of the South there are negroes working who are not organized."

Shirt Waist and Laundry Workers.

"Have no objections to negroes in the trade ; they are in it now in considerable numbers, and the policy has been to organize them in separate locals."

The Granite Cutters National Union.

"Negroes are not debarred from membership, but very few of them learn the trade. In the South granite cutting is called a 'white man's trade.' Consequently the negroes do not look for employment at it, and if they did the employers would be backward about hiring them, simply because from custom and mutual understanding it is considered a white man's trade.

"In the North there are few who care to learn the trade, and, in fact, it requires either more activity or more skill than the negro is capable of or cares to apply to work of any kind ; hence there are few of them following the trade at all, but so far as our laws are concerned, they are not debarred from membership."

Carriage and Wagon Workers' International Union.

"Negroes are not barred from membership. If any local union discriminates against them they do it without the sanction of the national body, and in opposition to the laws of the organization."

International Association of Machinists.

"No negroes are known to be working at the trade. At least none are members of the union. There are, probably, some negro machinists in the Southern States."

International Brotherhood of Leather Workers on Horse Goods.

"There are no negroes working at the trade in New Jersey, so far as is known. There are only five or six negroes working at this trade in the United States, and they are members of local unions with white men of the craft.

"Negroes are not excluded by the laws of the brotherhood."

Brotherhood of Painters, Decorators and Paperhangers of America.

"The brotherhood has upward of three hundred negro members who are all in separate unions. They are, however, entitled under the law of the organization to the privilege of becoming members of any local union under its jurisdiction, as no man is debarred on account of race, color or creed.

"The secretary says further: 'I might state, however, that the prejudice against the negro is very strong, and while it is contrary to our constitution to refuse to admit men of that race, it would be very hard for a negro to gain admission to any local union of our brotherhood in any of the Eastern or Southern States, and even the granting of charters to them for separate local unions is strongly opposed by local unions in many sections of the country.

"There is reason to hope, however, that time and education will eradicate this feeling, and the trades unions of the country will see the necessity of organizing and educating the negro so as to prevent him from being used against them in struggles involving their rights and interests."

International Wood Carvers' Association.

"No negroes are known to be working at the trade. Nothing in the constitution, however, forbids their doing so, or prevents their being received in the local unions as members."

United Association of Journeymen Plumbers, Steam and Gas Fitters and Helpers.

"There are a number of negroes employed at the plumbing trade in various parts of the country, but none have ever applied for admission to the unions.

"The constitution and by-laws of the union do not exclude negroes from membership. It is to be regretted that such negro workmen as are employed at the plumbing trade usually procure work in the very small shops where an almost exclusively jobbing trade is done, and are therefore not thrown in immediate contact with members of the union. The negro plumber appears to hold himself aloof from the union."

International Jewelry Workers' Union of America.

"Never heard of a negro being employed as a mechanic in any branch of the jewelry business. Nothing in the law of the union to prevent his becoming a member or working at the business if properly qualified."

United Textile Workers of America.

"Negroes are working in mills situated in the Southern States, but they are employed exclusively at work which requires no skill and is of a very dirty and disagreeable character; none of them are members of any trade body affiliated with the United Textile Workers of America."

American Wire Weavers' Protective Association.

"Negroes are not allowed to become members of the association, hence none of them are at work at the trade.

"The constitution provides that applicants for membership must be white males, twenty-one years of age."

Chain Makers' National Union of United States of America.

"No negroes known to be employed at the trade anywhere."

United Gold Beaters' National Union.

"No negroes employed in any capacity at gold beating anywhere in the country."

Print Cutters' Association of America.

"No negroes are employed at print block cutting. The business requires skill of a very high order, and there are not more than four hundred men in the country who are qualified to work at the trade.

"To become practical and efficient workmen a long apprenticeship must be served at the trade.

"There is nothing in the constitution or by-laws of the union forbidding negroes to join. The occasion for such a measure has never arisen."

Amalgamated Leather Workers' Union.

"No negroes are working at any branch of the trade requiring skill. Men of that race, however, are eligible to membership equally with whites the law of the order making no distinction between men on account of race or creed."

International Union of the United Brewery Workmen of America.

"Negroes are employed in the various departments of the brewery as drivers, stablemen and laborers of various kinds, but none having to do with the operations necessary for the production of beer. There is one brewery in Montgomery, Alabama, in which all the skilled workmen are negroes. These do not belong to the union.

"The negro laborers employed in most breweries are members of the unions, and have all the privileges enjoyed by white men."

American Federation of Musicians.

"Negroes are admitted to local unions with white men in the northern part of the country. In the South, where the feeling against the negro's pretensions to social equality is very strong, it has been found expedient to issue special charters to unions composed entirely of negro musicians."

International Union of Steam Engineers.

"There are a considerable number of negroes now working at the trade who hold membership in the same local unions as the white men. Where there are a sufficient number of negroes to form a union they are so organized separately. There is one such organization composed entirely of negroes.

"There are no special rules in the constitution applicable to negroes." *

National Association of Steam and Hot Water Fitters and Helpers of America.

"There are no rules bearing on the admission of negroes to membership. Only one man of that race is known to be now working at the trade, and he is a member of a local composed, with the exception of himself, entirely of white men."

Journeyman Barbers' International Union of America.

"Negroes are admitted to membership in the local unions of the craft on equal terms with white men. At least this is the case in all parts of the country except the South, where negroes are most numerous, and where the color line is sharply drawn. There negro barbers are organized into separate locals. At a very low estimate there are now one thousand two hundred colored members of the International Barbers' Union.

"One of the general vice-presidents of the international body is a negro, and another was grand chaplain some few years ago. The conditions in the union between white men and negroes are perfectly equal."

International Brotherhood of Bookbinders.

"No distinction is made among workmen in the trade on account of color; the requirements for membership in the union are that the person should be a good workman and should have learned the trade in the regular way by serving an apprenticeship of four years.

The secretary of the International Brotherhood writes: "I have no knowledge of the color of men belonging to the union other than the local to which I am attached has two negro members who work at the trade and are considered good mechanics. These men receive the same wages and work an even number of hours with the white workman, and are in every respect treated as equals by the white men of the craft."

International Typographical Union.

"The union has never recognized the existence of a color line. Competent negro printers have always been and are now eligible to membership in our local unions.

"The laws of the organization entitle all active members to the same rights and privileges."

Cigarmakers' International Union.

"There are many negro members in the locals of the International Union and many locals having such mixed membership. As a rule, however, negro cigarmakers show a preference for local organizations composed entirely of men of their own color. This is particularly the case in the South."

Coopers' International Union of North America.

"Have no rules or laws recognizing the color line or any other form of discrimination on account of nationality or race. There are many negro coopers in the Southern States; their number is about equal to that of white men working at the trade. In many instances the negroes have unions of their own, but there are also a large number of locals composed of whites and negroes together."

Broom and Brush Makers' Union.

"Does not bar negroes from membership, and have many of them mixed in with whites in local organizations. There are also some local unions composed entirely of negroes. All mechanics are treated exactly alike, whether white or black."

Amalgamated Sheet Metal Workers' Alliance.

"Have no laws prohibiting the admission of negroes to membership, but know of no instance where they are in a local union of the trade along with white men.

"In the Southern States a limited number of the race are employed as metal workers in one or another form; in the cities of Charleston and Savannah there are two local unions composed entirely of negroes who work at the trade."

"As the industry is one which requires much skill it is questionable whether these negroes ever become proficient in all its branches, or possess sufficient skill to work up to the standard established in Northern workshops. In Southern cities the negroes employed in the trade do not command as high a wage as the white mechanic. While this may reasonably be attributed to their lack of skill, it may be in part, at least, because of their color."

The total number of circulars sent to the central unions was eighty-five; from these the answers immediately preceding, sixty-four in number, were obtained. A perusal of them will show that only two organizations, the Railway Telegraphers and Electrical Workers, have laws which forbid the admission of negroes as members. Nineteen others state that while their laws do not exclude negroes none of them are in the unions or working anywhere at these trades so far as known. Some few among them candidly admit that while under their laws negroes are eligible on the same terms as white workmen,

yet if one were to apply for admission the chances would be largely against his success. Forty-three, or two-thirds of the total number, who were heard from on the subject, declare unreservedly in favor of equal rights for negroes and whites both in the unions and the workshops.

All of these forty-three unions have negro members, some in local organizations with whites, but a large majority, particularly in the South, have locals of their own affiliated with the national trade body.

So far as the superior organizations of labor are concerned the foregoing communications show that liberality of sentiment toward the negro and recognition of his rights as a member of the human family, has taken the place of the bitter and unreasoning prejudice that, a little more than a generation ago, sought to close all skilled occupations to him by law.

Satisfactory as this is and full of bright promise for the future, it must be borne in mind that control over membership and power to decide who shall be admitted and who rejected, is, under the system of the American Federation of Labor, entirely in the hands of the local unions. As before noted, all the central organizations with only two exceptions have incorporated in either their laws or declarations of principles the proposition that from the standpoint of labor all men are equal, and that the color, creed or nationality of a workman should, and so far as they are concerned, shall be no bar to his admission if otherwise qualified for membership. This is, however, little more than a benevolent abstraction with only moral force at its back, and can easily be nullified by a local union disinclined to admit negroes.

LOCAL TRADE UNIONS AND THE NEGRO.

To test the sentiment of the local organizations toward the negro as a workman and co-laborer, and also with a view to showing whether or not his absence from the skilled industries is due to their opposition, a circular was sent to the secretaries of all local unions in New Jersey under the jurisdiction of the American Federation of Labor. The circular contained the following questions:

1. May negroes join your union?
2. If not, how is their admission prevented?
3. If they may join, have you any negro members at present?
- . . . If so, how many? . . .

4. Have any negro applicants been refused admission to your knowledge?

5. Does the law or the custom of the union forbid the admission of a negro if he is otherwise qualified?

6. If not admitted to membership, what are the chief objections to them?

7. Are these objections likely to be overcome in time?

8. Do you know of any negro workmen now being employed anywhere at your trade?

9. If so, please name the places?

10. Do such negroes receive the same wages as white men for the same kind of work?

11. General observations. Add here any facts or opinions you may wish to express regarding the negro. They will be held as strictly confidential if you so desire.

Three hundred of these circulars were sent out, of which number one hundred and ninety-six were returned, containing the information sought in a more or less complete form. The unions from which replies were received represent the following occupations:

Bottle blowers.

Boiler makers and iron ship builders.

Barbers.

Bakers and confectioners.

Boot and shoe workers.

Buffers and polishers.

Book-binding.

Brewery workmen.

Carpenters and joiners.

Cotton spinners.

Cigar makers.

Coopers.

Carriage and wagon makers.

Coal handlers.

Drivers and stablemen.

Electrical workers.

Folders of textiles.

Glove workers.

Hatters.

Hosiery workers.

Horse shoers.

Leather workers.
 Leather grainers.
 Leather tackers.
 Longshoremen.
 Machinists.
 Malsters.
 Musicians.
 Potters.
 Painters, decorators and paperhangers.
 Printers.
 Rug makers.
 Rubber workers.
 Retail clerks.
 Steam engineers.
 Steam and hot water fitters.
 Saw smiths.
 Stove mounters.
 Stereotypers.
 Terra cotta workers.
 Textile workers.
 Tide water boatmen.
 Trunk and bag workers.
 Wood, wire and metal lathers.
 Wall paper machine printers and color mixers.
 The following are some of the replies received:

Bookbinders—"Negroes are eligible."

Carriage and Wagon Makers—"Have never had an application for membership from a negro, but think if one were made it would not be looked on favorably by members."

Saw Smiths—"Negroes are not eligible; do not regard them as a desirable class of people."

Folders of Textiles—"Negroes not eligible. Folders are finishers of all goods classed as textiles; these goods are 'yarded' on a machine by girls and passed on to the folder. He takes the goods and puts them up in style ordered for shipment to market. The machine girls would never consent to work for a negro."

Machinists—"Negroes not admitted; they and all races but whites are excluded by the constitution of the union."

Wet Leather Tackers' Union—"Negroes not admitted. If one were to apply he would be blackballed. The chief objection to them

is that in tacking leather on frames the workmen fill their mouths with tacks as shoemakers do, and take them from there to be driven through the leather into the frame. As the tacks are used over and over again the thought that a negro had had them in his mouth previously proved so disgusting that white men refused to work with them."

Potters—"Negroes not admitted, although nothing in the constitution or by-laws forbids their admission. If one were to apply he would be blackballed."

Terra Cotta Workers—"Negroes not admitted. Their admission is forbidden by the by-laws and by general custom."

Typographical Union—"There is nothing in the constitution or by-laws to prevent the admission of a negro if otherwise qualified. Two unions of the craft, however, state that negroes would surely be blackballed if any of them applied for membership."

Five other unions of the same trade say that applications for admission on the part of negroes if good workmen and of clean character would receive fair treatment.

Barbers—Negroes are eligible to membership as a general thing, but restrictions of a certain kind are imposed by some of the locals; thus, in one of them it is the rule that a negro barber who conducts a shop for persons of his own race exclusively, is expected to join a union made up entirely of men of his own color, or he may become directly connected with the International Union. But, if he conducts a shop in which white men only are worked upon, he may join the local with barbers of the white race.

Most of the communications received from barbers show a spirit of friendliness toward the negro as a fellow-craftsman.

Painters, Decorators and Paperhangers—There is nothing in the constitution of the national organization that prevents the admission of negroes as members if they should be otherwise qualified. Regulations relating to membership are, however, left to the locals, each of them being at liberty to make these as they see fit. Out of nineteen locals reporting thirteen unqualifiedly declare their readiness to admit negroes who know the trade and are up to the standard in other respects; the other six state that negroes would not be admitted as members under any circumstances.

Bakers and Confectioners.—Out of four reports received from as many local unions, three admit negroes and one does not. The constitution of the national union does not discriminate against the

negro, and he is not excluded from the single objecting local by any by-law; there is simply a general understanding among the members that one applying for admission shall be black-balled.

Textile Workers.—Negroes are not admitted to membership in the union, although it is admitted that one man of that race is working as a designer in the rug factory at which a large majority of the members are employed. This negro is not in the union and would not be admitted to it as a member.

Cotton Spinners.—Negroes are not admitted to membership; their exclusion is brought by a general understanding that an applicant of that race shall be black-balled, the sentiment of the whites being against them as fellow workmen.

Longshoremen and Marine Transport Workers.—The two unions of this organization that have reported, state that negroes would be gladly admitted to membership if they desired to connect themselves with the locals. Apparently, however, they do not wish to join, although many of them are working as longshoremen along the water front of New York and Philadelphia where they successfully compete with white men on the basis of lower wages. Longshore work is done in all southern sea coast cities almost entirely by negroes.

The officers of the unions are very anxious to bring the negroes into their organizations and will cheerfully admit them on terms of perfect equality with white men.

The secretary of one of these locals writes that in the cities of Philadelphia and Camden there are now about three thousand negroes working on the docks as longshoremen who might be persuaded to join a union but for the opposition of their employers and the consequent fear that by doing so they would loose their jobs. The negroes also appear to believe that if they demanded the same wages as white men, employers would prefer the latter, and that they should thereby loose the employment entirely.

Wood, Wire and Metal Lathers.—One union out of five reporting does not admit negroes. Their admission is not prevented by the constitution or by-laws, but, it is stated, if one should apply for membership he would be black-balled.

In striking contrast to this policy are the liberal views on the subject of the admission of negroes expressed by another union of the

same trade, the secretary of which states that "negro applicants would not be excluded if any should offer themselves, and it is only exceedingly narrow minded persons who would object to them." The same official summarizes the race question in this direct and forceful way: "The only difference I see between a negro and a white man is that one can be a *black* gentleman and the other can be a *white* gentleman; if neither one can be a gentleman, then both are alike loafers."

Electrical Workers.—Reports were received from five unions, all of which declare that negroes are not admitted to membership, and that an application having that end in view would not be received from a black man.

Boilermakers and Iron Ship Builders.—Negroes are not admitted to any of the six unions reporting. The constitution limits membership to white men only. That this policy is not unanimously endorsed is shown by the secretary of one of these locals who writes: "The colored man, in my opinion, is more to be trusted and respected by the unions than many, if not any of the foreign races that are now coming to our shores. The negro very seldom takes the place of men on strike who are striving to better their condition."

Drivers and Stablemen.—"Negroes are not admitted. Their exclusion would be effected by the black-ball if one should apply for membership."

Brewery Workmen.—"Negroes not admitted. No law against receiving them, but if one were to apply he would be rejected by the use of the black-ball."

Brewery Engineers and Firemen.—"Negroes are not admitted; they are excluded by the constitution of the union."

Carpenters and Joiners.—Under the constitution and by-laws of the organization, negroes are not excluded from membership, but two local unions out of the twenty-four reporting, admit that notwithstanding the law on the subject, if an application for membership were to come to them from a negro, it would be rejected by vote of the members.

Glass Bottle Blowers.—Negroes are not excluded from membership, by any law of the organization, but four out of the eight locals reporting state that negroes would not under any circumstances be admitted.

Of the twenty-two organizations whose attitude toward the negro is shown in the foregoing paragraphs, only six, viz.: The Typo-

graphical, barbers, painters, decorators and paperhangers, bakers and confectioners, longshoremen and wood, wire and metal lathers unions avow themselves willing to receive negroes as members; and of these, the barbers union alone report having workmen of the negro race on their rolls at the present time.

The other sixteen state that under no circumstances would negroes be admitted, notwithstanding the fact that the national organizations of these trades, without exception, declare in favor of a contrary policy. But as before stated, this is one of the important details, the regulation of which local unions reserve to themselves. It seldom happens that a uniform policy is pursued by all the locals of the same trade; some are cordially willing to accept the negro as a member when he comes, and others will not have him on any terms.

However, a great majority of all the unions from whom answers to the circulars were obtained announce themselves as unreservedly in favor of equal opportunities for whites and blacks, and assert their readiness to welcome to their ranks all workmen of good character without regard to creed or color, who are properly qualified to practice their trades. These have, for the most part, stated their friendly attitude toward the negro in the fewest possible words, evidently regarding their position as one not requiring extended argument or explanation.

From this showing, it would appear that hostility of white workmen is no longer the obstacle to the negro's industrial progress it once was. That there is still some prejudice is shown by the frank avowals of the unions quoted above; if it extends beyond these and is found among others to any great extent, the sentiment is not strong enough to cause its open avowal.

The next thing to consider in the relation of the negro to organized labor is the extent to which he has availed himself of the privilege of joining such unions as are open to him. On this point the reports from one hundred and ninety-six locals, embracing all the skilled or semi-skilled occupations in which negroes in any number have found employment, shows at the present time only fifty-four of that race in New Jersey holding membership in trade organizations with white men; there are no locals composed entirely of negroes.

The colored men are divided among the trades as follows: Barbers, eighteen; carpenters and joiners, seven; steam engineers, seven; tide water boatmen, six; rubber workers, five; musicians, three; leather workers, two; painters, decorators and paperhangers, two;

printers, one; wire and metal lathers, one; shoemakers one; and bottlers and drivers, one.

These are of course not all the negroes employed at the above named and other trades; a large majority of the organizations report negro work men employed at their crafts, some in New Jersey and other northern and eastern states, but principally in the South, who have never applied for admission to the unions.

These men, it is asserted, work for much lower wages than white unionists in the same trades.

Only five applications of negro mechanics for admission to the unions of their crafts are reported as having been rejected. These were—one carpenter, one electric worker, one painter and paper hanger, and two steam engineers. The reason assigned by the unions for refusing to admit the painter and paper hanger, and the carpenter was that neither of them were competent workmen. No explanation is given of why the others were rejected.

The answers received in reply to the request for a statement of the chief objections to negroes, where they are not received into unions, or in cases where white men particularly object to working with them, are not numerous and shed but little light upon the question. The following are some of them:

Boiler Makers.—“The principal objection to the negro lies in the fact that he is a negro and consequently very servile; negroes do not live as well or require as much for support as whitemen. They, therefore, work for much less wages; a majority of them are not sufficiently intelligent to have any ambition in life beyond supplying the merely material necessities which they are contented with in the cheapest and rudest forms.

“There is little or no ambition among them to found or improve homes and accomplish other things that have a bearing on the decorative or intellectual side of life. Their indifference to influences that make for refinement will keep them backward in the march of progress until the race awakes to an appreciation of higher things.”

Carpenters and Joiners.—“Their color and low instincts make them undesirable associates for white men.”

Glass Bottle Blowers.—“Do not believe the average negro is capable of acquiring the skill necessary to become a successful glass blower. They are naturally lazy and are not clean in their habits. Close association with them, such as is unavoidable in a glass house, would be a very disagreeable experience for white men; then, too,

whitemen would not care to use blow pipes that negroes had had in their mouths."

Longshoremen.—"Negroes are not objectionable to white men engaged in our work, and we would be glad to have them in the union. They do not, however, show any great desire to come in, principally because they will bid for employment at lower rates than unionists demand."

Cotton Spinners.—"His color and certain well known disagreeable personal characteristics are the great objections to the negro. White workmen will never be reconciled to working with them, until a great change in these respects has taken place."

Bakers and Confectioners.—"The negro is naturally lazy and it is doubtful if the race can ever become capable of doing work requiring extreme and long sustained physical exertion. There are other objections to him as a workman and an associate, but these would probably disappear in time if he could be induced to join the unions and profit by the protection and the morally elevating influences of unionism. In the South, three bakers out of every five are negroes; there seems to be no objection to him in that capacity there, but in the North, the public seems to object to his handling bread or other flour foods in their raw state."

Cigar Makers.—"Race prejudice seems to be the only grounds on which opposition to the negro can be explained. This sentiment is widespread and has its origin in nature which has imposed certain moral and physical characteristics for the possession of which it is hardly fair to hold the race responsible. It is questionable whether a cigar manufacturer would employ a negro even if he knew the trade, and white men would almost surely refuse to work with him. Smokers would generally refuse to smoke cigars made by negroes because of the disagreeable odor thrown off by them when perspiring. Then, too, as a race they are given to deceitfulness and are altogether unreliable. The negroes referred to are these found in and about the cities of the North: the writer has nothing to say against those of the Southern states or of Cuba."

Potters.—"It would be almost impossible to say on just what particular grounds negroes are objected to. The best explanation would probably be that they are by nature and habits so unlike whites that no common ground can be found on which something like sociability with them might be established."

Terra Cotta Workers.—"Have much trouble with the few negroes employed here. They are dishonest and utterly untruthful."

Machinist.—“Men in the trade would not work or have any kind of intercourse with negroes as shopmates. In occupations in which both races are employed, negroes work for much lower wages than are paid to white men; if they were to become machinists in numbers, wages in the trade would go down through their competition.”

The general observations, embodying such facts or opinions regarding the negro show in the main a disposition on the part of the unionists to treat him with kindness and sympathy. While some lay stress on certain moral and intellectual delinquencies and defects that are alleged to be general among negroes, and express opinions unfavorable to their capacity for acquiring a knowledge of the higher mechanical arts, or even adapting themselves to the requirements of lower grades of labor, so as to be tolerable co-workers with white men, a great majority of the unions who have taken the trouble to write on the subject at all, speak of the race without even a shadow of unkindness and advance highly optimistic views as to the change to be effected in the race traits and characteristics of negroes under the influence of the better environment which the race will win for itself, if tolerance and encouragement are extended to it by the whites.

Many of them plead earnestly for recognition of the negro's right to equal opportunities, and urge that independent of the moral obligation always resting upon the strong to succor the weak, broad, enlightened, self-interest leaves no course open to the white men but to encourage and assist the black in his struggle for self-advancement.

With the unions open to them it is strange that so few negroes are found in the ranks of organized labor; even in the unions of unskilled workmen such as longshoremen, teamsters, bricklayers, etc., in which they would be welcomed, there are very few negroes compared to the vast number of them working at these occupations.

It would seem that the only plausible reason for their not seeking the benefits and advantages offered by trade organizations, is that they can do better as independent workmen. The negro understands fully that under union rules, with an arbitrarily fixed wage rate to which he must adhere, his chances of employment would be seriously lessened. The average employer if obliged to pay the same wages to whites and blacks would prefer the former, and the negro would thus be deprived of the only advantage he now enjoys in the competition for work, that is, a willingness to take whatever wages he can get.

That there are practically speaking no negroes in any of the skilled trades unions is easily understood. In the first place, notwithstanding the theoretical freedom which he enjoys to join these organizations, there is a lurking consciousness in the minds of the few who are qualified for membership, that they are not wanted and that most, if not all, the white members would look upon them with distrust and dislike. Then too, most negro mechanics have learned their trades in ways not regarded as "regular" by union rules, which circumstance in itself would in many of the trades, insure their rejection in case they applied for membership, as it would white men also, notwithstanding they might be fully up to the standard of proficiency in all branches of the trade. As for negroes learning trades under union apprenticeship rules, the chances of their ever being able to do so in any number seems very remote.

A correspondent, who is an officer of a union, writes on this subject and what he says regarding his own trade may be taken as true of all, or at least of those requiring much skill: "I do not think negroes have much chance to learn cigar making in this locality as the rules are so narrow that it is hard for even a white boy to get a chance to learn."

It seems to be certain that negroes are admitted to unions only because of the necessity of guarding against the reduction of wages which follows their competition. In occupations to which large numbers of them are attracted, almost altogether those requiring but little skill, negroes find easy admittance to the unions because it is in these lines that their competition is felt most severely. That so very few of them join is proof that the interested character of the welcome offered is pretty well understood, and that a surrender of the right to work for such wages as may be offered which must follow their being unionized, would simply mean the loss of such employment as they now have in these occupations.

Diseases and Disease Tendencies of Industries.

THE POTTERY INDUSTRY.

A thorough canvass of the potteries in the city of Trenton for the purpose of gaining, as nearly as possible, an exact knowledge of the health conditions prevalent in the trade was made by the Bureau of Statistics in 1904.

The results reached through visitations of the works and direct personal statements obtained from pottery owners and operatives show that the conditions and circumstances peculiar to the trade which produced diseases in former years have, to a fairly large extent, passed away as a result of improved factory buildings and the adoption in many old potteries of the latest methods of sanitation and ventilation.

Under these circumstances the general health of pottery operatives—at least those of them who work in establishments where these preventives are found—should be no worse than that of workmen engaged at other lines of indoor labor.

The inquiry made by the Bureau was extended to every pottery establishment in Trenton, and the schedule used contained a list of questions selected and arranged with a view to bringing out the information desired.

Returns were received from thirty-three (33) firms, which employed between them at the time of making the canvass an aggregate of three thousand seven hundred and fifty-one (3,751) persons, about six hundred and seventy-five (675) of whom, or eighteen (18) per cent. of the total number, were females.

While the blanks were, for the most part, filled out with evident care, some of the questions having the most important bearing on the purposes of the inquiry were on many of them left practically unanswered being filled with "don't know" or "keep no

record" or some other equally curt sentence indicative of either unwillingness or inability to furnish the information.

But, as before said, a majority of the schedules were returned with the questions answered with satisfactory completeness. From these reports it is made apparent that while a great deal has been done during late years toward making the trade fairly healthful, there still remains much to do if it is to be made absolutely so.

The inquiry was directed entirely toward ascertaining the diseases, if any, that are peculiar to or necessarily involved in the operations required for the production of pottery ware, and to show also what factors of a kind liable to produce accidental injury to operatives there may be in the machinery or other appliances customarily used in the processes of manufacture.

Although much has been done toward the eradication of related diseases by improved methods of mixing clay and preparing the dipping solutions, and also through the custom of having all sweeping done at night, when no one but those engaged in cleaning up are in the works, there is still much room for improvement along the same lines before the pottery trade is as free from conditions that menace the health of operatives as it is capable of being made.

The work of improvement has been carried further in some plants than in others. Many firms have adopted every known means to protect their workmen's health, and have brought about very gratifying results in improving their vigor and prolonging their lives.

There are still some establishments, however, where these improvements have not been carried so far as they might have been, and in which "lead colic," potter's asthma" and other ailments anciently peculiar to work at the potter's trade still holds sway to some extent.

An inspection of the potteries which was made in connection with this inquiry showed in the main a body of men who displayed in their general appearance no strongly marked symptoms of ill-health which were traceable to work. Old potters told of the gradual disappearance of the dreaded and once generally preva-

lent potter's asthma through the introduction of machinery for doing the work that was formerly the most fruitful cause of the disease. Up-to-date methods in the clay-mixing room and the dipping room, which have always been regarded as the most unhealthy branches of the trade, have greatly lessened the dangers to health that once existed.

While there are still traces of lead colic among some of the dippers, its presence is now much rarer as well as being of a milder type. Before the introduction of these methods a comparatively few years ago, operatives working in the slip or dipping rooms rarely reached forty years of age, but now these departments or branches of the trade present little if any greater menace to health than is associated with other divisions of the work.

With regard to accidents in the potteries, where all modern safeguards have been adopted, the only dangerous work now is said to be about the kilns; but the risks connected with them are slight, and such as do occur are, generally speaking, the result of carelessness on the part of employes whose work necessitates their being about them. Dust, once the prolific cause of consumption and asthma, has to a large extent ceased to be so, all sweeping and cleaning up being done at night, so that operatives beginning their day's labor in the morning find comparatively clean and wholesome workrooms.

Physicians whose practice lies largely among potters, when consulted on the subject of pottery diseases, have stated that there has been a pronounced decline in potter's tuberculosis, lead colic, and other forms of illness during recent years, and that those who are now suffering from any of these maladies must have contracted them before the present sanitary measures were put in operation, or else they have neglected the simple rules necessary to protect themselves against the dangers to health that, under the best of regulations are to be found in most occupations by careless or negligent employes.

The schedule blank distributed among the pottery employes contained the following questions:

1. Name of firm.
2. Location of factory.
3. Date of establishment.
4. Principal goods manufactured.
5. Average num-

ber employed during the year 1904. 6. Total number of deaths among employes during 1904. 7. Total number of fatal accidents during 1904. 8. What, if any, are the diseases peculiar to the pottery industry? 9. What branches of the pottery industry are considered unhealthy? 10. What are the principal ill-health producing factors in the pottery industry? 11. How many employes were absent from work on account of sickness during 1904? 12. In what branch of the pottery industry is liability to accident greatest? 13. What are the principal accident producing factors in the pottery industry? 14. Are there many foreigners employed in the pottery industry? if so, name the races or nationalities. 15. Is intemperance among employes of common or rare occurrence? 16. Have improvements been introduced during recent years tending to diminish the disease and accident liability in your pottery?

As stated before, thirty-three of these firms responded promptly to the request for information, filling out the blanks with apparent care.

The date of establishment of these potteries ranges from 1902 backward to 1857, the year when The Thomas Maddock Sons Company works, the oldest in Trenton, were first opened. One establishment has been in operation continuously since 1864; three others have been running from 1868, 1878 and 1879 respectively up to 1904; twenty-two were organized during some one of the years between 1889 and 1900; and seven were started after 1900.

The aggregate number of workmen employed in all the potteries under investigation was 3,571.

In answer to the question as to the number of deaths that had occurred among employes during the year covered by the inquiry, twenty-two firms reported that none of their employes had died, five reported their inability to answer the question because no record was kept, and one failed to answer the question in any way.

Only five firms reported the loss of employes by death, the number ranging from one to four. The number of persons employed in these establishments was 533, and the percentage of deaths reported among them all was twelve, or 2.3 per cent. of the

total working force. Some of these establishments, of course, show a much higher relative percentage of deaths than the figures representing the general average. In one instance two deaths are reported among an average working force of thirty-six men; the percentage of deaths in that place is therefore 5.5. In another establishment fifty-two men were employed and three persons, or 5.7 per cent. of the total number, were reported as having died during the year.

Of the potteries reporting deaths, the smallest proportion is shown by an establishment employing eighty-five persons, among whom only one death occurred.

On the diseases peculiar to the pottery trade, seventeen firms either fail to report at all, or else state that they were not aware of there being any ailments of a kind to which pottery operatives were more subject than other persons. On the other hand, the managers of sixteen establishments distinctly recognize the existence of such diseases, and not only name them, but give the departments or branches of the business mainly responsible for their production.

Of the diseases, potter's asthma, which is reported by thirteen establishments, is the most prevalent. The ailments admitted by three other firms as existing among their workmen are "potter's consumption," which is probably only another name for the asthma; "lead colic," and "lead poisoning," are phrases which evidently refer to the same complaint.

In every instance, where the existence of disease is admitted, the peculiar factors or features of the work to which it is traceable are also reported. These are, although stated in varying phraseology, all charged to two causes, viz: Dust from the clay-mixing and flint-grinding operations, and white lead, with other chemicals which go to make up the dipping mixtures used in the glazing of ware.

These diseases exist in degrees of intensity that vary according to the measure of attention given by operatives to hygienic laws that are, in more or less complete form, a part of the rules which all pottery workmen are required to observe. Some obey them strictly, and thus escape the infections which too often bring their

less prudent fellow-workmen to a condition of permanently-impaired health or to premature graves.

Taken as a whole, the making of pottery ware, while still, in some branches, justly regarded as a dangerous trade, is now far less marked by health-destroying incidents than it was known to be in years gone by. The hygienic laws of the occupation have been studied to advantage, and methods have been devised whereby the deadly influences formerly surrounding certain of its branches have been brought under control.

Statements obtained from intelligent operatives, who have spent years in the Trenton potteries and have worked at all the mechanical branches of the trade, would seem to bear out in the main the truthfulness of the accounts given by employers regarding the health conditions which now exist in their works.

These workmen agree in affirming that if certain objectionable features that at present exist were modified or entirely abolished, there would remain no reason whatever for the pottery trade being regarded as more fatal to health or detrimental to longevity than most of the hundreds of other indoor occupations followed by the largest part of the working force of the world.

The naturally injurious effect of dust inhalation is, of course, admitted, but the havoc wrought by it during the earlier years of the pottery trade here was assisted and supplemented by the drinking habits of the workmen of that time, who were almost all foreigners, trained in European works, who immigrated here in the early history of the trade.

Undoubtedly the excessive use of alcohol had as much to do with the early breakdown of health and the brief average duration of life in the case of these men as the unhealthy conditions necessarily surrounding their work.

These bad conditions began to improve after numbers of American workmen had secured a foothold in the potteries; the desire for stimulants and their excessive use became less, largely under the influence of the more temperate habits of their American fellow-workmen and the new social associations which they formed here.

The opportunity to live better than they had done in their

old homes, because of higher wages, acted as a stimulus to ambition and produced a marked improvement in the men's habits.

The influence of a new and better environment had therefore wrought a wonderful change for the better in the habits of these pottery workers of early days; the health of the workmen and their consequent power of resistance to the inroads of disease were no longer weakened, or at least not to the same extent as formerly, for the excessive use of alcoholic stimulants. This happy change has been productive of progressively good results as each year has gone by. There are, of course, still many men working at the trade who are intemperate, but indulgence in drink is neither so general as it was in the earlier years of the trade, nor is the habit, where it survives, characterized by the same degree of grossness.

At one time it was quite the ordinary custom for the wives or children of workmen to go to the potteries on pay-day to collect the wages of the husband or father, for fear that if he handled the money himself, the greatest part, if not all, of his week's earnings, would be spent in the saloons before he reached home.

But this is all changed now; the custom was brought here with the first immigrant potters, and has happily died out under the influences that have done so much for the elevation of these men and their successors in the trade. Employers refused to retain the services of workmen who could not be trusted with their own earnings, and have put a stop to the practice. But that the custom was once generally prevalent is shown by signs still displayed in some potteries, which read that "wages will be paid to the workmen only."

Thus one of the principal, what may be called non-incidental or unnecessary causes of the early physical breakdown of pottery operatives has been so far removed as to no longer be the active agent of destruction that it once was.

Although hygienic conditions in the Trenton potteries are at the present time vastly better than they once were, the standard in this respect is, generally speaking, somewhat lower than that which prevails in the western establishments. But it must be remembered that the industry is old in New Jersey and comparatively new in the west. Here the first buildings in which

to carry on the trade were erected nearly fifty years ago. These are, to a large extent, reproductions of those devoted to similar uses in England, that is to say, little or nothing being known at that time of modern laws of hygiene and sanitation, these subjects were not considered in planning the first structures.

On the other hand, a vast majority of the western potteries have been established during the past twenty years, a period of marked devotion to and interest in the problem of how to best conserve the health and energy of factory operatives by improving the character of their surroundings while at work.

The natural result, therefore, is that western pottery buildings, being for the most part modern in their construction and appointments, are free from many of the objectionable features that necessarily are found in those of Trenton by reason of their much greater age.

The modern pottery plants of Trenton, those erected during recent years—and there are several of them—are as up to date in the matter of scientific sanitation and ventilation as any to be found elsewhere at the present day, but it must be admitted that there are still a number in which health conditions are not satisfactory, and never can be made perfectly so while the present ancient buildings are allowed to stand.

The pottery plants in which sanitary ware is produced are fine places to work in, being almost without exception large roomy buildings, with clean open floors and numerous windows. The floors are kept clean, the sweeping being done thoroughly at night, so that there is never a large accumulation of clay on the floor, which would otherwise grow up there to become pulverized and converted into dust through being trodden upon by the workmen.

The same custom, that of sweeping the floors at night, is followed in almost all the general ware shops, and where it is thoroughly done, the improvement so far as concerns the purification of air, is of decided value. There is, however, much to be desired still in this respect; while sweeping out, a large quantity of the finest powdered dust naturally arises from the floors and finally settles on beams, rafters, window casings, stairways, or other resting places favorable to receiving it; these

deposits are again put into circulation and made more or less active when the work of the day begins.

This trouble is not helped, but rather made worse by the blowers which are used in cold weather to force hot air into the large workrooms; the atmospheric agitation thus produced, disturbing the deposits of dust, and densely impregnating the air with it again.

In some instances the nightly sweeping is done dry; in others, the floors are sprinkled. Where the former course is pursued, by far the larger part of the dust remains indoors; the results of sprinkling are not much better, the clay on the floor, where wet, becoming pasty and heavy, is apt to require scraping as well as brooming for final removal, and much of it remains after the cleansing operation is performed and is again trodden into fine dust by the workers of next day.

The brushing or scouring of the biscuited ware is perhaps the most dangerous dust generating process known to the manufacture of pottery. As before stated, this work is done by women and during the operation their hair and clothing is covered with a fine white dust. Where the ware made, is china or semi-porcelain, the danger from the scouring dust is much greater because of its being largely composed of calcined ground flint, which has a particularly irritating and dangerous effect when lodged by inhalation in the lungs or the bronchial tubes of operatives.

The removal of ware from the "saggers" after the first firing is also attended by the production of much dust, that under existing arrangements in many Trenton potteries seems to be unavoidable. "Kilnmen" and "scourers" are alike subject to it in this process; but the pulverized flints not being used for packing, it is much less harmful than that arising from the second firing.

Another branch having health conditions peculiarly its own, is that of firing the ware in ovens or kilns. The heat to which the kilnmen are exposed is very great, besides which there is much coal dust and gas from the fires. Drawing the kilns is particularly severe on the health of men who do it, and a serious tax on their physical endurance. Profuse sweating is

caused by the heat of the ovens which must be entered to remove the ware; the men are liable to suffer greatly from frequently passing back and forth from these heated chambers, to the ordinary temperature of the work-room. Draughts are quite frequent about the parts of the potteries where this work is performed, and a no inconsiderable amount of illness of at least a temporary character is caused thereby. This inherent or necessary evil of the kilnmen's occupation is greatly increased by frequent exposure of themselves to the cold outer air when distressed by heat and perspiration.

The placers, as the men who arrange the ware in the saggars are called, are of two classes—one handling the articles shaped by the throwers and pressers before being glazed, and the other, taking care of the pieces that have passed through the hands of the dippers and are covered with lead enamel or glaze. The first has only to contend with mineral dust, but the second must endure lead dust also, and consequently such workmen are extremely liable to become victims of lead poisoning. This last class are technically known as “glost-placers,” and the others are called “biscuit placers.”

These branches are not always kept distinct; the kilnman is at times also a placer, and the biscuit placer occasionally works at glost placing.

The callings of these several classes of workmen who are employed about the kilns and furnaces, renders them especially liable to rheumatic affections, generally in the form of lumbago and sciatica.

A brief survey of the finishing department seems necessary in order to complete the account of the pottery manufacture as understood in the wide significance of the term, although dust is not an active disease producing element in this branch of the trade.

The finishing department has two principal divisions—painting and gilding. Both of these are in every essential respect, sedentary occupations. Except in the composition of colors employed, painting on china or earthenware does not differ from painting on any other kind of substantial material. Its chief incidental disadvantage is that of its being a sedentary employment. The

colors used are of metallic origin, because they must withstand fire. Nearly all of them have poisonous qualities that for the most part are traceable to lead and which are productive of lead poisoning in many branches of ordinary painting.

The greater part of the painting is done in enamel colors, either under or above the glaze. They are mixed with turpentine and laid on with camel-hair pencils. Sometimes paraffine or petroleum is used in mixing colors, and in the case of superior ware, the mixing is often done with essential oils. Enamel painting, if done with ordinary care and attention, is rarely productive of injury even where the colors contain lead; but in ornamenting very common ware, the colors are mixed with gum water, and being put on rather thickly and carelessly, the worker's hands are coated with the mixture, and in some instances lead poisoning follows.

In ornamenting certain kinds of ware, the colors are heavily laden with lead, and being mixed with water and thickly laid on, a fine dust is thrown from the rapid drying of this material, that is often very injurious. Ground laying is another name for covering the surface of ornamental ware; the color is mixed with lead in the form of a very fine powder which is dusted on the surface. At one time this operation was universally performed by hand, a soft rag or brush being used for the purpose; although some of the work is still done in this way, the greater part of "ground laying" is now performed with an instrument known as the "spraying machine." With this apparatus, the color is drawn by compressed air from the vessel containing it and distributed evenly over the surface to be ornamented. The introduction of the spraying machine has been of great benefit to the health of the operatives; ground laying done in this way leaving a much thinner coating of color, there is a far smaller quantity of the poisonous dust set in motion by laying it on, than under the old hand method.

Another leading branch of the finishing department is that of "gilding."

Formerly the gold used for that purpose was reduced to a fine powder, joined with mercury, and brought to a semi-fluid condition by being mixed with oil. The mixture was then laid

on in tracery by pencils. When fired in the kiln, the mercury disappeared leaving the gold in a dull condition, which required burnishing to bring it to a metallic appearance. This operation is almost entirely performed by women.

Like painting, gilding is a sedentary occupation performed in a stooping attitude at the work bench. A strong odor of the turpentine and oils used in the work and pervades the finishing room at all times, being quite distressing to the operatives, particularly new beginners. This disagreeable condition is made worse by the almost constant heat of the workrooms, by gas emanations, coupled in some potteries with a serious neglect of, or indifference to ventilation. Although there is no dust of any consequence generated in the finishing rooms, there are gases of an injurious kind, and also superheated air which could be removed by exhaust fans with great resultant benefit to the health of those employed in them.

A practice productive of much evil, but one for which the operatives in this department are themselves responsible, is that of using their saliva to wet the surfaces of the material to be burnished. This waste of saliva, physicians agree, has a weakening effect on digestion. Gum water is provided for this purpose, but the operatives, at least many of them, appear to prefer the other method.

There are many other comparatively petty circumstances of an annoying, but not particularly dangerous character associated with the work carried on in the finishing department, but the importance of these is not such as to justify giving an account of them in detail, and further consideration of these minor matters may be dismissed with the statement that similar drawbacks are found to be associated with most other industries that are carried on indoors.

Among such operative potters and decorators as have been interviewed in connection with this paper, the consensus of opinion favors the proposition that practically all the dangers to health arising from work in the clay department and also in the finishing or decorating branches of the trade, could be either totally removed or at least greatly modified by the use of exhaust fans. This seems to be a very well-grounded expectation so far as dust,

gases and vitiated air are concerned. There remains, however, other conditions which menace health that cannot be dealt with in that way.

Those surrounding the work of kilnmen, placers, glost placers and dippers are all of this kind. The consequences of alternation from extreme heat to the ordinarily cool atmosphere of a large room which the kilnmen must undergo are practically unavoidable. The best that a careful and prudent man so employed can do is to avoid exposing himself to draughts while in a heated and perspiring condition. The same dangers attend the work of the placers, both "biscuit" and "glost," only in a less degree. These workmen must enter the kilns under very much the same conditions as the kiln or ovenmen and, in fact, the duties performed by these workmen are of an interchangeable character, each one of them being at times required to take up the other's work.

Alterations of heat and cold and the temptation to obtain relief from the excessively high temperature of the ovens by exposing themselves to cooling draughts of air are evils common to all these branches of pottery occupation. The inhalation of mineral dust is the natural accompaniment of "placing" biscuit ware, but the glost placer has to contend with a far more dangerous compound of dust arising from the fact that the ware which he handles has passed through the hands of the dippers and is therefore coated with lead enamel or glaze. Lead dust surrounds the glost placer and his hands and clothing are more or less covered with lead enamel, according to the degree of care exercised by him in handling the ware.

Workers at this branch of the trade frequently become victims of lead poisoning.

By keeping in mind the circumstances of the callings of these several workmen, it may be readily seen that those employed about the ovens in any capacity are especially liable to rheumatic affections, either in the form of sciatica or lumbago, and in a higher degree than other pottery workmen to acute bronchial and chest inflammation. These workmen are also subject in no slight degree to dangerous affections of the lungs from the inhalation of coal gases arising from the over fires.

Under these circumstances there is but little these workers can do against the dangers that necessarily surround them except, as before said, to avoid whenever possible exposing themselves to draughts and keeping hands and clothing as free from the lead-infused enamel or glaze as the character of their work may permit.

It is greatly to be regretted that there are no reliable vital statistics of recent date relating to the pottery trade, and consequently no sure means of determining just how far the improvements in processes, known to have been made during the past decade, together with the adoption of measures for the better ventilation and sanitation of pottery producing establishments, have been effective in eliminating or modifying the diseases related to the trade, improving the health, and extending the active lives of operatives engaged in it.

In 1892 Dr. J. T. Arlidge, consulting physician to the North Staffordshire Infirmary, an institution located in the center of one of the principal pottery districts of England, published a work on the Hygiene, Diseases and Mortality of Occupations, in which the diseases of the pottery trade as observed by him in his practice are set forth in a table in comparison with the same ailments found on investigation among non-potters of the working class.

Dr. Arlidge finds that the mean age at death of male potters, aged twenty and upwards, was forty-six and one-half years, while that of non-potters stood at fifty-four. The most prevalent causes of death among the former were diseases of the chest, pulmonary consumption and diseases of the heart and nervous system. While potters had a mortality from chest diseases of 12.29 per cent., other work-people had only 7.86 per cent. The potters died from consumption in the proportion of 12.90 per cent. and the non-potters in that of 9.27 per cent. In the matter of heart diseases, these stood at 4.03 per cent. in relation to potters and only 2.21 per cent. among all others in the community. The death of male potters from diseases of the respiratory organs was 60 per cent. of their entire mortality, while only 27 per cent. of the entire male population died from these diseases.

The maximum of deaths from these causes among potters, Dr. Arlidge finds, occurs in the ten years between fifty and sixty years of age, and progressively diminishes each preceding de-

cennium until the twentieth year is approached. In the twenty years between forty and sixty years of age, 43.52 per cent. of the entire mortality occurred. With regard to "phthisis," the maximum mortality was reached between thirty and forty. The inference drawn by Dr. Arlidge is that pulmonary consumption cuts off potters predisposed to it in the greatest ratio prior to their reaching forty years of age, while those not so predisposed fall victims to the non-tubercular chest diseases that are the special consequences of their employment at a much later period of life.

Quoting the records of the out-door practice of the infirmary, Dr. Arlidge shows that among an equal number of patients treated the ratio of pottery workmen suffering from "bronchitis" and "phthisis" was, in the first-named disease, 36.57 per cent. as against only 18 per cent. of non-potters, and 20.90 per cent. who had phthisis against 13 per cent. of non-potters who were afflicted with the same disease.

"Plumbism" was found in 8 per cent. of the male and in 5.06 per cent. of the female pottery workers, while among the same number of non-pottery working people of both male and female who were treated for various diseases not one single case of plumbism was found.

Dr. Arlidge gives the results of an examination of 263 pressers, all males, a class of workmen exposed, he says, more than any other to dust inhalation, and found that 55.5 per cent. of the total number were suffering from "bronchitis," 17.8 per cent. from "phthisis," and 10.6 per cent. from stomach disorders. As to the nature of sickness among clay workers, not pressers but either turners or throwers, the percentage found was, for "bronchitis," 1.7, and for "phthisis," 23.9. Compared with pressers the number of these artisans engaged in the trade is very small, and therefore the number available for the data necessary to making a comparison is too limited to be regarded as representing a general average.

A later work on the same subject, edited by Thomas Oliver, M.D., and published in 1902, represents the health conditions of the industry in England as being somewhat better than those described ten years earlier by Dr. Arlidge. The improvement is

attributed to better constructed buildings, the use of machinery for doing some part of the work once done by hand, and in an equally important degree to the more intelligent interest which the workers take in protecting themselves against dangers where it is in their power to do so.

There is every reason for believing that equal or even greater progress has been made during the same time in our own potteries at Trenton. The vital statistics compiled by the State Board of Health shows a much lower ratio of deaths among pottery workers from consumption and other pulmonary ailments than are recorded for some other classes of workmen. These figures, however, it is but just to state, relate only to deaths and shed no light on questions of ailments that required treatment by physicians, but which did not terminate fatally.

The opinions communicated by operative potters on the subject of eliminating, or at least modifying, the health-impairing features of their work may be summarized as follows: Work-rooms should be ventilated by means of fans, and not simply by open windows; scouring of china should be done in boxes closed as far as possible and provided with strong suction draughts on the side furthest removed from the worker, or else by revolving brushes driven by power in boxes and similarly provided with suction draught. At present this work is for the most part done by hand, over open troughs, into which the ground flint dust falls as it is brushed from the ware.

Covering in the form of respirators should be used over the mouth and nose by operatives, and since the form of pulmonary disease that affects pottery workers develops slowly, and may be retarded if not entirely arrested in its early stages, there should be in the interest of the operatives themselves an examination by a doctor at reasonable intervals, so that those in danger of lung diseases might be warned of its approach in time.

Draughts might also be applied as a means of at least carrying away the coal gases from the ovens and other disagreeable and dangerous vapors and dusts produced by the operations carried on in the decoration departments.

The accident-producing factors peculiar to the industry were found to be very few, careless handling of the pressing machines,

grinding clay and kiln placing, being the only ones mentioned in a number of the reports. These, however, were found, on investigation, to be dangers more theoretical than real, as only three cases of workers having met with accidental injury while at work were reported for the year covered by the inquiry.

The drinking habits of pottery workmen in the early history of the industry has been referred to in another part of this paper, and note has also been made of the change for the better in that respect, which became apparent as these first operatives came under the influence of their new environment. The facts brought out by this inquiry enables us to measure with some degree of precision the progress made by this important reform among the workmen at present employed in the trade.

One of the questions asked employing potters in connection with this inquiry was, "Is intemperance among employes rare or common?" The desired information was withheld by only two of the thirty-three firms reporting, these employing between them two hundred and eighty (280) persons.

Eight firms, employing an aggregate of eight hundred and fifty-nine (859) persons, reported intemperance as being "common;" eighteen firms, employing a working force which aggregated two thousand three hundred and sixteen (2,316), reported intemperance as being "rare," and four firms, employing one hundred and sixty-eight (168) persons state emphatically that intemperance is unknown in their respective establishments, and that a man once known to appear at the works in a state of intoxication would be peremptorily discharged.

The potteries reporting intemperance among their workmen as "common," also report the foreigners in their employ as being all of the non-English speaking races, the majority being Hungarians, Slavs, Poles and Italians. In the establishments reporting intemperance as "rare," the working force, outside of the American-born, is composed very largely of English, Irish, Scotch, Germans and a small sprinkling of Italians. In the establishments where intemperance is prohibited under penalty of dismissal from employment, the foreign-born part of the working

force is, as reported, composed of Canadians, Poles and Hungarians.

The total number of persons employed in the thirty-three potteries reporting was 3,623.

Intemperance is reported as "common" among 859, or 23.7 per cent., of this number; among 2,316, or 64.0 per cent., of the total number, the habit is reported as "rare," and 168, or 4.6 per cent., are working under rules which provides dismissal from employment as the penalty for intemperance. These may be classed with the next preceding group, which thus raises the number of pottery operatives for whom perfectly temperate habits in the matter of strong drink is reported to 2,484, or 68.6 per cent., of the total number. Two hundred and eighty (280), or 7.7 per cent., of the total number cannot be classified as to drinking habits, no report on the subject having been made by their employers.

It is by no means intended to say that the workmen included in the group reported as given to intemperance are all addicted to the excessive use of intoxicants. The facts are far from warranting such a conclusion. Indeed, it has been ascertained that in the eight establishments in which this group of workers are employed, the number of persistently-intemperate drinkers is relatively small, not perhaps more than 10 per cent. of the total working force, while approximately 20 per cent. of the remainder have been known to drink to excess at times, but do not do so habitually. Therefore, the report on drinking habits of this group must be taken to mean, not that all are habitually, or even casually, heavy drinkers, but rather that the number among them who are more or less constantly intemperate is large enough to make the habit appear to be a visible characteristic of the shops in which they are employed.

Conversely, the same may be said regarding the numerically larger group among whom intemperance is reported as being "rare." It must not be supposed that those included in it are all total abstainers from strong drink, nor that in fact some among them do not indulge at times to excess, but the instances in which such lapses occur are too few to be noticeable as an element influencing their general conduct as workmen.

The social condition of the potters has steadily improved. Forty or more years ago, when the foreign potters first came to Trenton, the excessive use of drink was general among them, and it was impossible to keep liquor out of the works. Those who were children at that time grew up under American influences, and, while retaining in most cases the racial peculiarities of a harmless kind, did not by any means adopt the careless course of their parents. Pottery operatives are now, and have been for many years back, as sober a class of workmen as any to be found in the communities in which their labor is carried on.

HEALTH REPORTS OF POTTERIES.

Table No. 1—1904.

Office Number.	Principal Goods Manufactured.	Average Number Employed During Year 1904.	Number of Deaths Among Employees During Year 1904.	Number of Employees Who were Sick During Year 1904.	Diseases Known to be Peculiar to the Industry.	Principal Ill-Health Producing Factors in the Industry.	Branches of the Industry that are Considered Unhealthy.
1	Earthenware,	250		*	Potters' Asthma,	Flint and dust,	Clay department
2	Sanitary ware,	52	3	*	None reported,	None reported,	None reported.
3	Electrical porcelain,	30		*	None reported,	None reported,	None reported.
4	Sanitary ware,	165		*	None reported,	None reported,	None.
5	Electrical porcelain,	95		*	None reported,	None reported,	None.
6	Porcelain hardware trimmings,	18		*	Potters' Asthma,	Lead,	Dipping room.
7	Sanitary earthenware,	60	2	*	Potters' Asthma,	None reported,	Dipping room.
8	Pottery,	146		*	None reported,	None reported,	None.
9	Pottery ware,	239	*	*	None reported,	None reported,	None.
10	Sanitary ware,	105		*	None reported,	None reported,	None.
11	General ware,	162	*	*	None reported,	None reported,	None.
12	Electrical porcelain,	125		*	None reported,	None reported,	None.
13	Laundry ware,†	125			None reported,	None reported,	None.
14	Porcelain insulators,	21		2	Potters' Asthma,	Dust and lead,	Dipping room.
15	Sanitary earthenware,	36	2		Potters' Asthma,	White lead,	None.
16	Sanitary and toilet ware,	175			Potters' Asthma,	None,	None.
17	Laundry ware,†	100			None reported,	None,	None.
18	Sanitary ware,	125			Potters' Asthma,	White lead,	Dipping room.
19	Sanitary ware,	10		*	Potters' Asthma,	White lead,	None.
20	Electrical porcelain,	25			Potters' Asthma,	None reported,	None.
21	Sanitary and druggists' specialties,	125			Potters' Asthma,	White lead,	None.
22	Sanitary and toilet ware,	150		*	Potters' Asthma,	White lead,	Dipping room.
23	Belleek china,	50		*	None reported,	None reported,	None.
24	Sanitary ware,	41			Potters' Asthma,	Dust,	Dipping.
25	Sanitary and druggists' specialties,	72			None reported,	None reported,	None.
26	Knobs, hardware supplies,	38		*	None reported,	None reported,	None.
27	Earthenware,	350			Lead poisoning,	White lead,	Dipping room.
28	Knobs, hardware supplies,	31	1		None reported,	None reported,	None.
29	Porcelain pottery,	85		*	None reported,	None reported,	None.
30	Sanitary earthenware,				Potters' consumption,	None reported,	None.
31	General ware,	275			Potters' Asthma,	Dust,	glazing department.
32	Sanitary earthenware,	300	4				
33	Sanitary earthenware,	42		1			

* No record kept.

† Laundry ware, including bath-tubs, kitchen sinks, lavatories, wash-tubs, etc.—new industry in the pottery business—is conducted in large, open shops, having a tendency to be even more healthy than the other branches. There is no lead used in this production.

HEALTH REPORTS OF POTTERIES.
Table No. 2—1904.

Office Number.	Principal Accident-Producing Factors Peculiar to the Industry.	Number of Accidents to Workmen During Year 1904.	Improvements Made During Recent Years to Diminish Disease and Accidents—Yes, No.	Intemperance Among Employers—Rare or Common.	Nationality of Foreigners Employed in the Industry, 1904.
1	None reported.	None.	No.	Common.	Hungarian and Slavish.
2	None reported.	None.	No.	Common.	None.
3	Grinding clay.	None.	No.	*	None.
4	None reported.	None.	Yes.	Rare.	German.
5	None reported.	None.	No.	Rare.	Italian.
6	None reported.	None.	No.	Common.	Italian and German.
7	Kiln placing.	None.	No.	*	Polish and Canadian.
8	None reported.	None.	No.	Common.	Polish, Hungarian, German, Italian, etc.
9	None reported.	None.	No.	Rare.	Few.
10	None reported.	None.	No.	Rare.	Scotch.
11	Engine room and slip house.	None.	No.	Common.	Hungarian and Italian.
12	Carelessness on part of employees.	None.	No.	Common.	Polish.
13	None reported.	None.	No.	Rare.	English and Irish.
14	Press shop.	None.	No.	Common.	German.
15	None reported.	None.	No.	Rare.	Hungarian.
16	None reported.	None.	No.	Rare.	English and Irish.
17	None reported.	None.	No.	Rare.	English and Irish.
18	None reported.	None.	No.	Rare.	English and Irish.
19	None reported.	None.	No.	Rare.	German, Polish and Slavish.
20	Running engine.	None.	No.	Rare.	Italian.
21	None reported.	None.	No.	Rare.	English and Irish.
22	None reported.	None.	No.	Rare.	English and Irish.
23	None reported.	None.	No.	Rare.	German.
24	None reported.	None.	Yes.	Rare.	None.
25	Machinery.	None.	Yes.	Rare.	German.
26	Press shop.	None.	No.	Rare.	Italian.
27	None reported.	None.	Yes.	Rare.	English and Irish.
28	Presses.	None.	No.	Rare.	Italian.
29	None reported.	None.	No.	Common.	Polish.
30	None reported.	None.	Yes.	Common.	Hungarian.
31	Carelessness on part of employees.	Two.	Yes.	Rare.	Italian.
32	Carelessness on part of employees.	None.	Yes.	Rare.	None.
33	Slip house.	One.	Yes.	*	Russian and Polish.

* Not allowed.



Wages and Production in the Glass Industry from 1875 to 1905.

This review of the changes that have taken place in the glass industry, covering a period of thirty years, is written from information furnished by men who for an even greater length of time have followed the trade as blowers, and are therefore thoroughly familiar with every new feature introduced into the processes of manufacture during that period. These workmen are in a position to know how far the closely related interests of production and compensation per unit of labor have been affected by such changes as have taken place.

Besides the information obtained from this source, the records of the largest and oldest established glass manufactories—courteously opened by their proprietors for inspection—were examined for the purpose of obtaining the greatest possible amount of light on this branch of the subject.

Many details of an interesting character relating to factory improvements both structural and administrative were brought to light; and although instances are not wanting in which the health and physical comfort of operatives were almost the sole reasons for making changes in both respects which involved the expenditure of large sums of money, still in a majority of cases, the reasons for departing from the old and time-honored methods of work were, in one or another way, related to the idea of increasing the volume and at the same time diminishing the cost of production.

Like all progressive business men, glass manufacturers are, and as a matter of course, always have been, ready to adopt new appliances or make any changes in the methods of manufacture which promises to increase profits without impairing the quality of the ware; or that may seem to promise an improvement in

quality without, at the same time, increasing to a serious extent the cost of manufacture. Several such innovations—one or two of them of an almost revolutionary character, were found to have been introduced and will be noticed here in the order of their importance.

But the main purpose of this paper is to indicate the trend of glass blower's wages over the period of time under review, showing the relation which the daily or weekly product of ware per man bore to his earnings; improvements in processes of manufacture are to be noticed only in so far as these may have affected the question of wages.

It is a matter of regret that information of the desired particularity could not be obtained, but enough has been secured to show that while glass blowers wages were high a generation ago, they are very much higher to-day; the increase being accompanied by a corresponding enlargement of output brought about by the introduction of labor-saving appliances, together with a general improvement in factory organization and management.

The most important improvement made in glass making plants during the thirty years covered by the investigation is undoubtedly the substitution of the tank for the old style pot furnace; the economy effected by this change extends to all branches of the trade.

Under the tank system, there is no lapse in the melt, and continuous work by day and night shifts is made possible. Blowers are no longer obliged to use the long irons formerly required for gathering glass when pot furnaces were in vogue, but can now with far less labor, skim the glass from the surface of the tanks, using gathering irons that are much shorter and capable of being handled with greater rapidity.

The importance of the tank furnace as a labor saving adjunct to glass houses is shown by the fact that the average product of ware per blower has increased twenty-five per cent. (25 per cent.) since its introduction. The correctness of this statement is vouched for by the manager of one of the largest establishments engaged in the glass trade.

The abandonment of the pot furnace has brought about improvements in all branches of the trade. Other changes have led to an increase of production in certain lines of ware, at the same time reducing the labor cost, but as yet the great majority of articles made from glass are produced in the old way without the aid of machinery of any kind. There has, however, been a tendency toward a more thorough specialization of work which wherever applied, has led to greater expertness and larger production. A case in point, and one that serves to illustrate what is meant by the specialization above referred to, is the change from single blower method of doing work, which prevailed previous to 1870, to what is now known as the "shop system;" that is to say, three men now work together, two of them gathering glass and blowing the ware, while the third makes the neck smooth, and otherwise finishes the bottles produced by the other two. The average product of bottles for each gang of three men working together in this way, is from 275 to 300 dozens per day; in the case of especially expert men the day's work is often much larger.

Formerly, the single blower, working with only the mould shutting and snapping up boys' help, was regarded as having produced a very good day's work when he made 40 or 42 dozens per day.

But the most important change yet made or rather suggested in the processes of making glass ware is undoubtedly the machine for blowing bottles, which is operated by compressed air. As yet these machines are in the experimental stage, but practical glass workers have no doubts as to their ultimate success; indeed, a manufacturer states that there is one now in operation which gathers the glass, moulds the bottle, and conveys it to the lehr.

Other details relating to the glass trade, which were brought out by the inquiry, will be found on the following pages.

BLOWERS' PRICES—FLINT GLASS.

In 1885, almost all the large glass-ware plants in New Jersey were combined for the purpose of agreeing on and fixing prices. A manufacturer's association was formed, which has since held

annual conferences with representatives of the blowers at which prices for the next blast are adjusted, and all new styles of ware examined and appraised to the satisfaction of both parties.

The list of prices first agreed upon prevailed in the trade without change until the blast of 1894-1895. Since that time, the discounts have been as follows:

Blast of 1894-1895, below 8 oz., 8 per cent.; above 8 oz., 12 per cent.

Blast of 1895-1896, below 8 oz., 8 per cent.; above 8 oz., 9 per cent.

Blast of 1896-1897, below 8 oz., 15 per cent.; above 8 oz., 18 per cent.

Blast of 1897-1898, below 8 oz. (cork), 15 per cent.; above 8 oz., 18 per cent.

Blast of 1897-1898, below 8 oz. (stopper), 8 per cent.; above 8 oz., 12 per cent.

Blast of 1898-1899, below 8 oz. (cork), 15 per cent.; above 8 oz., 18 per cent.

Blast of 1898-1899, below 8 oz. (stopper), 5 per cent.; above 8 oz., 8 per cent.

Blast of 1899-1900, below 8 oz. (cork), 6 per cent.; above 8 oz., 9 per cent.

Stopper bottles for this blast were paid for at the net list price, without discount of any kind.

So as to understand the difference in discounts made on "corked" and "stoppered" ware, it may be well to explain what is meant by both terms. Corked ware is finished entirely by the blower, the fact that it is to be stopped by a cork renders any particular care in making the bottle neck unnecessary, such irregularities as are unavoidable in that kind of work being rendered harmless by the elastic character of the cork. "Stoppered" ware, on the other hand, has to be made with care so as to produce an opening favorable for grinding in the stoppers which are also of glass. The stopper is ground into the neck of each bottle until an accurate fit—both air and liquid tight, has been secured. Grinding is a distinct branch of the glass industry, and the workmen employed at it have a price list of their own, graded for all the various sizes of ware. The earnings of grinders will probably average about fifteen dollars per week; the work is somewhat dangerous, because of bottles breaking while being treated, causing lacerations of the hands and sometimes also of the face. There have been some in-

stances where the sight of an eye has been destroyed by accidents of this character.

Since 1901, there have been no differences of moment between the manufacturers and the blowers, and the net list is reported to have prevailed without change since that year.

In the green glass trade, very nearly the same conditions have prevailed; the discounts reported are for the same years as those noted above in connection with the flint ware, and are as follows:

Blast of 1894-1895, 14 per cent. from the general list.

Blast of 1895-1896, 10 per cent. from the general list.

Blast of 1896-1897, 15 per cent. from the general list.

Blast of 1897-1898, 15 per cent. from the general list.

Blast of 1898-1899, 15 per cent. from the general list.

Blast of 1899-1900, 7 per cent. from the general list.

From the year last referred to until the present time, the net list has been maintained without abatement of any kind.

BLOWERS' PRODUCT OF WARE PER DAY.

Back in the 'sixties, when the blowers worked singly, the product for good workmen averaged from forty to forty-two dozen bottles per day. About 1870 the shop system as at present in vogue—a "shop" consisting of three men, who divide the operations of gathering, blowing, and finishing between them—was established in the glass houses of the United States and Canada. Since that time the day's product has been steadily increasing year by year, until the average per "shop" is now three hundred dozens per day, or 138 per cent. more for each individual blower than it was previous to 1870 under the "single" blower plan. These figures are for the medium line of ware, viz., eight-ounce bottles.

As previously stated, the introduction of the tank furnaces has had much to do with this increase in production; its influence in that direction has been quite as great as that of the division of labor brought about by the shop system of blowing. The reasons for this are given above and need not be repeated here again.

WOODEN MOULD BLOWERS.

During many years back there has been but little change in either the amount of product or the wages of this class of workmen.

Wooden mould blowers are employed principally in making chemical and druggists' ware. Bottles made in wooden moulds do not show the seams, which are plainly apparent in all ware turned out from iron moulds. Glass articles made in wooden moulds are said to be much less brittle than those produced from iron moulds, and consequently not so liable to break from slight causes. Some grades of chemical ware made in New Jersey by wooden mould blowers enjoy a high reputation in the laboratories of Europe for their many excellent qualities. This class of labor earns from eighteen to twenty dollars per week.

CARBOY BLOWERS.

One of the most interesting and difficult branches of the glass-blower's work is the making of the large vessels known as "carboys." The production of these giant bottles is almost exclusively off-hand work, requiring much greater skill and strength on the blower's part than does the ordinary run of glassware.

Moulds are not used in making carboys except in the case of some of the smaller sizes, when a clay former is sometimes employed to aid in shaping the ware.

Previous to 1878 the carboy blower was able to earn larger wages than he can to-day, there being up to that time no limit to the number he was at liberty to produce. Afterwards, by an agreement entered into by the blowers, in which the employers acquiesced, a limit was placed upon the quantity that each man was allowed to make per day, thus very materially reducing their wages. It is said that before this self-denying agreement went into effect it was not uncommon to find specially expert carboy blowers who earned from sixteen to twenty dollars per day.

The following table presents a fair exhibit of the quantity produced and the wages earned per day by blowers of this kind of glassware:

<i>Carboys. Sizes.</i>	<i>Product per Day. Single Carboys.</i>	<i>Possible Earnings per Day.</i>
5-gallon,	140	\$12 00
10-gallon,	130	12 00
11-gallon,	130	12 00
12-gallon,	125	12 00
13-gallon,	120	12 00
14-gallon,	120	12 00
15-gallon,	120	12 00
17-gallon,	110	13 00
25-gallon,	108	14 00

To the varieties of carboys here tabulated should be added five-gallon bunkers—narrow mouthed, of which 300 per day are made; fourteen-gallon bunkers—wide mouthed, 265 per day; the same with narrow mouths, 265 per day; and five-gallon seltzers, 300 per day. On these wares the blower's earnings average from nine dollars and a half to ten dollars per day. The wages earned by carboy blowers are large, as they should be, considering the severely laborious character of the work and the high degree of skill required for doing it with the necessary exactness.

LAMP WORKERS.

The so-called lamp workers are mainly employed in making the ware known as homœopathic vials. These little bottles are made from tubing prepared by the tube drawers; the workmen, using a gas jet and blowpipe, turn them out with surprising rapidity. The earnings of men engaged on this class of work range from twelve to fifteen dollars per week.

BATCH MAKERS.

Probably the most important employe in a glass house is the "batch maker." Upon his skill and accuracy depend the quality of the glass and the smoothness and uniformity with which it can be worked; a pot of bad glass means considerable loss to the manufacturer in wasted material and to the workmen in loss of time.

Batch makers have always been well paid in the glass trade, and their wages over the past thirty years have varied but slightly, if at all. Their earnings are from four dollars and a half to five dollars per day, and in the case of some who are especially skilled in this branch of the business and have a formula of their own which is of particularly high value, wages equal in amount to those earned by the blowers are paid. Many batch makers preserve their formulas with the greatest care, passing the secret of its composition down from father to son for generations.

EARNINGS OF BLOWERS.

As before stated, the main purpose of this inquiry was to show the relation of wages or earnings of blowers to their product of ware over a period of thirty years extending backward from 1905, but notwithstanding the most diligent efforts made to that end, it was found impossible to obtain the data for each year separately. However, an examination of the books of several of the largest manufacturers, produced results by which average earnings at certain periods during the thirty years may be determined with approximate correctness.

Up to 1879 the average earnings of blowers appears to have been \$3.83 per day; from 1879 to 1890, the average was about \$4.83 per day; from 1890 to 1905, the average has been about \$5 per day. Of course, during all this time there were very expert workmen who earned much more, but these figures are about correct as averages.

BOTTLE-BLOWING MACHINES.

Many efforts have been made, and much work of an experimental kind done in the past toward the development of a machine to blow glass, but as yet without having accomplished perfectly satisfactory results.

Some progress, however, has been made, and enough has been done to discourage belief in the optimistic theory held by some glass workers, that machinery would never supersede hand work in their trade.

The nearest to a practical machine known in New Jersey is one that has proven to be fairly effective in producing wide-mouthed vessels, such as fruit, milk and pickle jars, in a manner that is quite satisfactory.

A machine of a far more perfect character than this one is said to be in operation at one of the largest of the western glass works; beer and mineral water bottles are, according to report, made by it with remarkable precision and rapidity. The machine is operated on an entirely novel principle, and is said to have a productive capacity of twelve bottles per minute, the ware being even more perfect in every detail than that made by hand.

It is a fact well known, that with the greatest possible carefulness on the part of blowers, bottles made by hand will vary to a greater or less extent in weight and holding capacity. These features of inexactness are entirely abolished in the work produced by this machine; bottles made by it are perfectly alike in size and weight, and will contain precisely the same quantity of liquid.

Outside of the batch maker and the shearer, no skilled labor is required in glass houses equipped with this machine, and, in fact, no other help is needed but these, and the boys whose duty it is to carry the bottles to the Lehr.

One of the largest glass manufacturing firms in New Jersey is reported to be now engaged in perfecting several machines for the manufacture of small ware; work upon them has progressed far enough to satisfy the practical men who are backing the enterprise, that every expectation regarding them will be completely realized, and that through their instrumentality changes closely approximating a revolution will be brought about in the glass trade.

Like promise of success has not, however, thus far attended the efforts made to develop some mechanical means of conveying bottles from the blowers' benches to the Lehr, although the difficulty experienced in securing a sufficient number of boys to do this work in consequence of the age limit established by the recently-enacted factory laws, has made the discovery of some method of performing this work by machinery a matter of primary importance to factory owners.

MOULD MAKERS.

The class of workmen known as mould makers are employed in making the iron moulds used in the production of some varieties of bottles; the lettering required for inscriptions on the bottles are cut by these men.

The wages of mould makers have not varied much in the past thirty years; they have averaged during that time about twelve dollars per week.

APPRENTICES.

For the past thirty years, the apprenticeship question has been something in the nature of a bone of contention between manufacturers and blowers; the former contending for liberty to employ a larger number than the rules of the union allow, and the latter not only resisting such a change, but striving for a still further curtailment of the employers' power to avail themselves of apprentice labor.

Until about ten years ago, and for many years previous to that time, one apprentice to every fifteen blowers was the rule. The proportion is now one to ten, the change having been brought about by its becoming manifest that the old ratio was too narrow to meet the natural demands of the trade, arising from the death or incapacitation of old workmen. Vacant places were therefore necessarily filled by foreign mechanics, and American youths lost the opportunities that should have been theirs, of gaining admission to one of the very best paid of all known handicrafts.

The more liberal apprenticeship regulations has changed this state of things to a very considerable extent, and since their adoption the number of American workmen who have learned to blow glass in local factories has greatly increased.

From almost the beginning of the trade in New Jersey, the apprenticeship term has been until recently, five years; and although it has been reduced to four in some factories, the longer period is still the rule in the largest number of establishments.

The wages allowed an apprentice is regulated by the earnings of the blower with whom he works; twelve and one-half per cent. of his pay is retained by the employer and goes into a fund technically known as "back money," where it is allowed to accumulate until the end of the apprentice's term, when it is paid over to him in one lump sum. This money is held as a safe-guard against any violation by the apprentice of the terms of his contract, such as leaving his employer before the expiration of his full term; should he do so, all right on his part to the back money—no matter how large the sum—is forfeited. Forfeitures have seldom occurred, and this penalty money, as it were, has come to be regarded as a welcome form of endowment which becomes payable when the apprentice has learned his trade, and is thereafter at liberty to practise it on equal terms with all others of the same calling. Many of the apprentices are family men, and the "back money" has frequently been the means of securing homes.

TENDING BOYS.

These boys, or at least the work done by them, is indispensable in the operation of glass factories; without their help blowers could not work and factories would be compelled to close up. Great difficulty is experienced in securing a sufficient supply of this kind of help, especially since the age limit for employment in factories has been raised to fourteen years. The unsuccessful efforts of manufacturers to meet this annoying situation by providing machinery for doing the work performed by these boys, has already been noted.

The technical designations applied to these boys in the glass houses, and which indicates the kind of duties performed by them, are "mould shutters," "snappers up," and "carriers in;" their pay, although not by any means large now, is still much better than it was years ago. Once it ranged from \$3.00 to \$3.50 per week, now it is from \$3.50 to \$5.00 per week; the amount paid within these limits depending on the efficiency of the boy.

SHEARERS.

Shearers are the men who have charge of the furnace fires, and upon their skill and unremitting attention to duty, very largely depends the quality of the glass melt. This class of workmen share with the batch makers, all responsibility for the quality of glass provided for the manufacture of ware. As good glass cannot be made from an incorrectly proportioned batch under any conditions, so also is it impossible to make good glass unless the proper heat is maintained, no matter how faultless the composition of the "batch" may be.

This class of labor has always been paid very fair wages. There are master shearers, who are usually paid \$18.00 per week, and assistants who receive from \$12.00 to \$15.00 per week. These rates, as shown by the reports, are somewhat better than those that prevailed thirty years ago.

PACKERS.

There has been very little change in the wages of packers during the period under consideration, but the slight variation shown has been in the nature of an advance. Boss packers receive as high as \$18.00 per week, and assistant or under packers are paid \$12.00. In some of the factories the experiment of employing women as under packers has been tried recently; they are still so employed in most of these establishments at wages averaging about \$6.00 per week.

Women have for a long time back been employed in packing small ware, but their taking up the heavier line of work is of comparatively recent date.

UNSKILLED LABOR.

Yardmen, as the common, unskilled labor employed in a glass factory is generally called, received in 1875 from ninety cents to one dollar per day. These men are now paid from one dollar and a half to one dollar and seventy-five cents per day, according to the kind of labor performed.

The Eight-Hour Movement.

How Reducing the Hours of Labor Has Affected the Cost of Production.

During the first session of the Fifty-eighth Congress a bill was introduced in the House of Representatives (H. R. 4,064) "limiting the hours of daily service of laborers and mechanics employed upon work done for the United States, or for any territory, or for the District of Columbia."

The quoted lines are taken from the title of the bill, the full text of which provides that after it has become law every contract made to which the United States, any of the territories, or the District of Columbia is a party shall provide in cases where the employment of labor is involved that no laborer or mechanic doing any part of the work contemplated by the contract shall be required or permitted to work more than eight hours in any one day upon such work.

In making such contracts the bill provided that a penalty of five dollars (\$5.00) per day for each workman, mechanic or laborer who may be required or permitted to work more than eight hours shall be exacted from the employer. Inspectors or other officers appointed to oversee work of the kind referred to in the bill, are required to report to the proper officer of the government—Federal, Territorial or Federal District—any violation of its provisions which may come under their observation.

The names of workmen who violate the provisions of the act are to be furnished with the report of the supervising officer, and the amount of the penalties imposed under the law is to be withheld by the officer or person whose duty it shall be to approve the payment of the money due under the contract.

Contracts for a very wide range of service and supplies are permitted to be made without reference to the act, and all its provisions and stipulations may be waived during time of war, or when war appears to be imminent, or when, in the judgment of the officer or inspector charged with the enforcement of the law, any great emergency exists.

No penalties are to be imposed for violation of the provisions of the act, which are due to any emergency caused by fire, flood, famine or other extraordinary event or condition.

The bill, after its formal introduction, was referred to the Committee on Labor and Industry, and by unanimous resolution of that body, the Secretary of the Department of Commerce and Labor was requested to investigate and report on the effects of the bill, stating his conclusions on the following questions:

1. What would be the cost to the United States, territorial or federal district authorities, of the various materials and articles customarily procured by contract, which would come under the limitations of the bill?
2. What damage, if any, would be done to the manufacturing industries affected by the bill, if enacted?
3. Whether manufacturers, who have hitherto furnished material to the Government, would continue to do so if their contracts were within the peremptory limitation set by the bill?
4. How would the bill affect the ship-building industry?
5. How would the bill, if enacted, affect the export trade of the country?
6. Are the workmen of the country, organized and unorganized, who would be affected by the proposed bill, willing to have taken from them the right to labor more than eight hours per day if they desire to do so?
7. How will the act, if passed, affect the agricultural interests of the country?

As most of these inquiries could not be answered either wholly or in part by statistical methods, there was but one way of obtaining the information desired, which was to secure testimony from establishments and firms from which the Government customarily procures materials and articles by contract, and which would come within the scope of the proposed bill.

Accordingly, the names and addresses of firms under contract to furnish material and articles to the Government were secured from the departments to which the goods were to be supplied.

Owing to the wide range of service specifically and inferentially exempted from the operation of the act, it became necessary to define as closely as possible the character of the contracts to which the bill unquestionably applied, as shown by agreement between its supporters and opponents. These appear to have been :

1. Public works, buildings, fortifications, river and harbor contract work, including under these headings, structural steel, stone and other contracted for material entering into construction.
2. Shipbuilding, including contract and sub-contract work for engines, boilers and other fittings.
3. Guns, gun forgings and gun parts.
4. Armor plate.

Before going into the question of the effect of this bill (H. R. 4064), it may be helpful, to an understanding of the field which its supporters intended it should cover, to state that by the act of August 1st, 1892, the service of all laborers and mechanics employed by the Government of the United States, by the District of Columbia, or by any contractor or sub-contractor, upon any public works of the United States or of the District of Columbia, is limited to eight hours per day.

At first glance, it would appear that all the purposes of an eight-hour law for persons employed by the Federal Government had been fully subserved by this act of 1892; but although it was doubtless intended to cover all workmen employed directly or indirectly by the Government, it was found, when reduced to practice, that its provisions applied only to workmen employed directly by the Government through its authorized agents, and not to those employed by firms holding contracts to supply the material to be used for public purposes. To make this distinction plain enough to be easily understood, the cases of two battle-ships, the *Louisiana* and *Connecticut*, will serve very well for illustration.

The construction of these two vessels—the largest of their class in the United States Navy—was authorized by Congress

at the same time; the act providing that one of them should be built in a navy yard and the other constructed under contract by some responsible shipbuilding firm, as had heretofore been the general course in naval work.

Under this arrangement, one ship—the Connecticut—was laid down in the Brooklyn Navy Yard, and the other—the Louisiana—was laid down in the yard of the Newport News Shipbuilding Company, in Virginia. The Connecticut, being under construction in a Government yard, work upon her is limited to eight hours per day, while the Louisiana, the construction of which is provided for by contract with a shipbuilding firm, is being built in a private yard by workmen who are employed ten hours per day.

The purpose of the bill under consideration (H. R. 4064) was to make all work done by private firms, under contract with the Government, come under the eight-hour law equally with that which is performed under direct governmental supervision at the navy yards.

As the law stands at present, the construction work must be performed on the eight-hour basis, but the material used which is produced entirely by private firms is generally speaking, wrought to its finished state by workmen who labor ten hours per day.

The change which advocates of the bill seek to have made would place all contract work for the Government on the eight-hour basis so that after its passage, private firms who contracted to supply material to the Government for warships, or for any other purpose, could work the men so employed only eight hours per day.

As government work, wherever done in private plants, is carried on side by side with that demanded by private enterprises, it follows that in most, if not all cases, there would be two working-hour schedules, had this bill became law—one for operatives on government work, and the other for all productions not of that character. A change of this kind would almost surely cause discontent and confusion, and lead to the weakening of discipline among workmen in shops where such anomalous conditions prevailed.

In order to ascertain as nearly as possible what the results would be if the act were to become law, the secretary of the department caused a circular to be sent out to all manufacturers holding government contracts, asking for information which in effect would be a fully reply to inquiries contained in the resolution of the Committee on Labor of the House of Representatives.

Before the investigation had progressed far, however, it became apparent that the replies would be entirely in the nature of testimony and would add but little to the expressions of opinion on the subject made by those who had already appeared before the committee. Measures were, therefore, taken to secure some more definite statements based on actual experience; owners of manufacturing establishments in which the hours of labor had been reduced during recent years were applied to for data illustrating the cost of manufacture and quantity of product per employe before and after reduction of working time.

The first intention of the department was to limit the inquiry to establishments which, at the present time were operating under the eight-hour day, but these were found to be so small in number comparatively and confined to so few industries that in order to obtain sufficient data the inquiry was extended to establishments in which the working hours had been reduced to nine hours per day at some time during the past few years.

While it was clear that the information obtained from these sources would not be strictly in line with the resolution of the House Committee, inasmuch as the establishments applied to for information were not such as would come under the limitations of the proposed bill, it was thought that facts based upon actual experience with careful keeping of cost figures, from establishments in various industries, while not conclusive as regards the effect of the adoption of an eight-hour day as provided for in the bill, would still add very materially to the value of the report by showing the effects produced where the working hours had been actually reduced.

A schedule containing inquiries calculated to bring out the facts regarding the effect produced on the cost of production by a reduction of working hours was submitted to the owners of such

establishments as were known to be working on a basis of nine hours or less per day.

Among the questions propounded by the inquiry schedule—twenty-one in number—were several directed to ascertaining the proportion, if any, of the total product of each establishment that is manufactured for the United States, or any territory, or the District of Columbia; and, also, to show the per cent. of the product of each establishment, if any, that was exported during the twelve months previous to the inquiry.

All other inquiries on the schedule had relation to the question of how production in volume and cost had been affected by the shortening of the workday, and whether, where the quantity of product fell off, a greater number of people were employed or an increase made in the number of days in the year on which work was carried on.

To furnish the information required, establishments filling out the schedules must be in a position to make a definite comparison of results which followed reduction in the hours of labor with those which were known to exist previous to the change.

The investigation showed 396 establishments, the returns from which were sufficiently complete to answer all purposes; while in each of these a reduction below ten hours had been made in the day's work, only a comparatively few of them, however, had gone down to eight hours per day.

Further on will be found a table which gives the number of establishments reporting a reduction in hours per week arranged so as to show each specified number of hours before and after the reduction and the amount of reduction made.

Establishments working on a basis of less than ten hours per day are not very numerous, excepting in the cigar making trade, stone cutting and other building trades. In the occupations connected with the building trades, such as plumbing, painting, lathing, plastering, roofing and general housesmithing, the eight-hour day almost universally prevails, but in the factory industries there has been as yet but little progress made toward reducing the work day below the old standard of ten hours.

These out-door industries are in a position to permit fluctuations in costs which would fatally disarrange any manufacturing

business; hence, factory owners must of necessity be conservative in the matter of reducing the hours of labor.

In the building and allied trades, there is practically no competition; each locality may be said to have its own market, which is seldom invaded by parties from outside. The masons, carpenters, etc., of any particular town or city need not fear being underbid in their home communities by workmen from other places; the work cannot be taken elsewhere, and consequently, working hours and wages of labor being the same for all, the margin of competition between contractors is limited to the profits that can be made by superior organizing ability on the part of the employer and the higher skill and efficiency of labor.

Conditions are quite different in the factory, the machine shop, the blast furnace, the ship yard, and in all other forms of manufacturing; competition in both home and foreign markets is severe, and the margin of profits in most industries is so small that a twenty per cent. reduction in the working time would be likely to bankrupt the establishment undertaking to make such a change, unless it possessed a compensating advantage in the form of labor saving machinery superior to anything owned by competing plants in the same industry. As this can hardly be, at least for any great length of time, the reduction for working hours in factory industries must necessarily be very gradual, all the establishments of each particular industry moving toward shorter hours at substantially the same pace in order to maintain the practical uniformity of conditions.

There being such a small number of eight-hour establishments, it was found necessary to seek for data for comparison where any substantial reduction had been made below ten hours per day, and where some definite statements could be given of the results under the shorter as compared with the longer work-day. A reduction of only one hour per day or from ten to nine hours could not, it was realized, be looked on as indicating accurately the results that would follow a reduction to eight hours per day; but, at the same time, in the absence of a considerable number whose experience of the eight-hour day could be had, instances of any kind of reduction in the work day were considered worthy of study.

In carrying out the investigation, as above indicated, 396 establishments, representing eighty-three (83) different industries were found in which a reduction in working hours had been made, and statements of the experience under both the shorter and longer working time could be given. The number of persons employed in these 396 establishments who were benefited by the reduction in working hours was 129,102, and the number employed in the same establishments whose hours of labor were not reduced was found to be 17,039. Of the 396 establishments covered by the investigation, ninety-two (92) were manufacturing in whole or in part for the United States Government, and would consequently come under the provisions of the proposed statute limiting the hours of labor on all work done for or by the Federal Government to eight hours per day. There were, also, one hundred and thirty-one (131) establishments, a part of whose products were exported to various foreign countries; these, of course, have to compete in foreign markets in making sales with similar wares that may have been produced under much longer working hours.

In the following table, the number of establishments reporting a reduction in working hours is given with the number of hours worked per week before and after the reduction, and also with the number of hours by which the weekly working time had been reduced. The table for which the figures are drawn from the report on the subject by the Department of Labor is as follows:

Number of Establishments Reporting.	Hours of Labor per Week		
	Before Reduction.	After Reduction.	Number of Hours of Reduction.
3,.....	84.0	56.0	28.0
1,.....	58.0	50.0	8.0
1,.....	72.0	53.0	19.0
1,.....	57.5	55.0	2.5
3,.....	72.0	48.0	24.0
1,.....	57.5	54.0	3.5
1,.....	70.0	56.0	14.0
1,.....	57.5	51.5	6.0
1,.....	66.0	55.0	11.0
4,.....	57.0	54.0	3.0
1,.....	66.0	59.0	17.0
1,.....	57.0	53.0	4.0
1,.....	65.0	51.0	14.0
1,.....	57.0	52.7	4.3
1,.....	60.0	57.0	3.0

Number of Establishments Reporting.	Hours of Labor per Week		
	Before Reduction.	After Reduction.	Number of Hours of Reduction.
1.....	57.0	52.0	5.0
1.....	60.0	56.3	3.7
1.....	57.0	50.0	7.0
1.....	60.0	56.0	4.0
1.....	56.4	48.0	8.4
1.....	60.5	55.5	4.5
1.....	56.0	46.0	10.0
9.....	60.0	50.0	5.0
1.....	55.0	53.0	2.0
175.....	60.0	54.0	6.0
3.....	55.0	50.0	5.0
1.....	60.0	53.5	6.5
1.....	54.0	51.0	3.0
4.....	60.0	53.0	7.0
2.....	54.0	50.0	4.0
1.....	60.0	52.0	8.0
28.....	54.0	48.0	6.0
2.....	60.0	51.0	9.0
4.....	54.0	47.0	7.0
4.....	60.0	50.0	10.0
1.....	54.0	44.0	10.0
1.....	60.0	49.5	10.5
1.....	53.5	48.0	5.5
12.....	60.0	48.0	12.0
38.....	53.0	44.0	9.0
3.....	60.0	44.0	6.0
1.....	51.0	48.0	3.0
3.....	59.0	54.0	5.5
1.....	50.0	46.5	3.5
1.....	59.5	49.5	10.0
8.....	50.0	44.0	6.0
7.....	59.0	55.0	4.0
1.....	59.0	44.0	15.0
30.....	59.0	54.0	5.0
1.....	59.0	53.8	5.2
3.....	59.0	53.5	5.5
7.....	59.0	53.0	6.0
7.....	59.0	50.0	9.0
1.....	59.0	48.0	11.0
2.....	58.5	54.0	4.5
1.....	58.1	51.0	7.1
1.....	58.0	54.0	4.0
1.....	58.0	53.0	5.0

According to the figures contained in the above table, there were, out of the 396 establishments reporting, 47, or 11.9 per cent. of the total that made a reduction to the eight-hour day, or forty-eight hours per week; 57, or 14.4 per cent., made a reduction to less than forty-eight hours, and 292, or 73.7 per cent., while making a substantial reduction, still had a work-day more or less longer than eight hours per day. The building and allied trades formed by far the greater part of the number working

less than forty-eight hours per week, and the Saturday half-holiday so generally prevalent among these occupations in the large cities, does much toward reducing the aggregate of working hours. The forty-four hour week is, probably without exception, the eight-hour day with a Saturday half-holiday.

Two hundred and fifty (250) establishments reported working fifty-four hours per week, or nine hours per day; this group constitutes 54.5 per cent. of the total number of establishments, and represents a wide variety of industries.

The number of establishments reporting a reduction from 60 to 54 hours per week, or from ten to nine hours per day, is 175, and the number reporting a reduction from 59 to 54 per week is 30.

As to the changes daily accompanying or following the reduction in working hours, the following are some that have been brought to light by the investigation: Of the 396 establishments included in the inquiry 316, or 79.8 per cent., report no reduction in wages, having followed the curtailment of working hours. In 25 other establishments a reduction of wages was reported, but the amount represented a smaller percentage than that of the reduction in hours. In 42 establishments an increase in wages was made at the same time that the hours of labor were reduced.

Considered according to the amount of reduction in working time per week, the effect on wages may be summarized as follows: Two (2) establishments reported a reduction of three (3) hours per week without change of wages in either case; ten (10) establishments reported a reduction of between three (3) and four (4) hours a week, in eight (8) of which there was no change in wages, and in one (1) a reduction that by percentage was smaller than the reduction in hours. Sixteen (16) establishments report a reduction of between four (4) and five (5) hours per week, with thirteen (13) reporting no change in wages, one (1) a reduction corresponding to the reduction in hours, one (1) a smaller per cent. reduction than in hours, and one (1) an increase in wages. Fifty-two (52) establishments reported a reduction of between five (5) and six (6) hours per week with wages undisturbed in forty-three (43) establishments, reduced to correspond with the reduction in time in one (1), reduced by

a smaller percentage in two (2), reduced by a larger percentage in three (3), and wages increased in three (3) establishments. Two hundred and twenty (220) establishments reported a reduction of between six (6) and seven (7) hours per week; of this number wages remained unchanged in 183 establishments; wages were reduced in proportion to correspond with working hours in five (5) establishments; wages were reduced by a smaller percentage than the reduction of working hours in seven (7) establishments; in one other establishment in this class wages were reduced by a larger percentage than the working time reduction, and in twenty-four establishments an increase of wages followed the reduction in time. Ten (10) establishments in which the working time was reduced between seven (7) and eight (8) hours per week reported no change of wages in eight (8) and an increase of wages in two (2) establishments. Three (3) establishments in which working time was reduced between eight (8) and nine (9) hours per day reported no change of wages in two (2) and an increase of wages in one (1) establishment. Forty-seven (47) establishments in which working time had been reduced between nine (9) and ten (10) hours per week reported no change in wages in forty (40), and an increase in wages in seven (7) establishments. Thirty-six (36) establishments in which working time had been reduced ten (10) hours and over per week reported seventeen (17) establishments as making no change in wages; one establishment making a reduction to correspond with the reduction in working hours; fourteen (14) establishments making a smaller and one a larger percentage of reduction than that of the working hours, and three establishments in which wages had been increased after the reduction in working hours had been made.

The effect of the reduction in hours per week upon the cost of manufacture is shown in a table in which the establishments are classified according to the hours of reduction. Under each group are shown the number of establishments in which there has been no increase of cost, and the number in which there was an increase in cost, with the percentage of increase. Only those establishments are included in which the results are due entirely to changes in working hours and wages.

About forty per cent. (40%) of the manufacturers who made statements relating to the effect of the reduction of hours of labor upon the cost of manufacture and the quantity of product per employe did so on the basis of carefully kept accounts both before and after the change, while the remainder were guided in reporting by a general familiarity with their business. The table is as follows:

Reduction in Hours per Week of—	Number of Establishments.
Under three hours:	
With no increase in cost,	1
With an increase of 4 but under 5%.....	1
Three but under four hours:	
With no increase in cost, .....	..
With an increase in cost of—	
Under 3%,	1
3 but under 4%,	1
5 " " 6%,	1
6 " " 7%,	2
10 " " 11%,	3
12 " " 15%,	1
Four but under five hours:	
With no increase in cost,	4
With an increase in cost of—	
Under 3%,	1
3 but under 4%,	3
5 " " 6%,	2
7 " " 8%,	2
11 " " 12%,	1
Five but under six hours:	
With no increase in cost,	6
With an increase in cost of—	
Under 3%,	3
3 but under 4%,	4
4 " " 5%,	4
5 " " 6%,	7
6 " " 7%,	1
7 " " 8%,	2
8 " " 9%,	1
9 " " 10%,	1
10 " " 11%,	9
11 " " 12%,	1
12 " " 15%,	1
20% and over,	1
Six but under seven hours:	
With no increase in cost,	16
With an increase in the cost of manufacture of—	
Under 3%,	7
3 but under 4%,	4
4 " " 5%,	7
5 " " 6%,	11
6 " " 7%,	9
7 " " 8%,	11
8 " " 9%,	5
9 " " 10%,	4
10 " " 11%,	58
11 " " 12%,	13
12 " " 15%,	18

Reduction in Hours per Week of—	Number of Establishments.
15 but under 20%	15
20% and over,	6
Seven but under eight hours:	
With no increase in cost,	2
With an increase in the cost of—	
7 but under 8%,	1
10 " " 11%,	2
11 " " 12%,	2
15 " " 20%,	1
Eight but under nine hours:	
With no increase in cost, . . . . .	..
With an increase in cost of—	
12 but under 15%,	1
Nine but under ten hours:	
With no increase in cost,	2
With an increase in cost of—	
5 but under 6%,	1
9 " " 10%,	1
10 " " 11%,	4
11 " " 12%,	30
15 " " 20%,	3
20% and over,	6
Ten hours and over:	
With no increase in cost,	6
With an increase in cost of—	
Under 3%,	3
3 but under 4%,	1
4 " " 5%,	2
5 " " 6%,	3
7 " " 8%,	1
8 " " 9%,	2
10 " " 11%,	5
12 " " 15%,	1
15 " " 20%,	4
20% and over,	1

The contents of the above table may be summarized as follows:

Reduction in Hours per Week of—	Number of Establishments.
Total number of establishments reporting reduction in hours:	
With no increase in the cost of manufacture,	37
With an increase in the cost of manufacture of—	
Under 3%,	15
3 but under 4%,	13
4 " " 5%,	14
5 " " 6%,	25
6 " " 7%,	12
7 " " 8%,	17
8 " " 9%,	8
9 " " 10%,	6
10 " " 11%,	81
11 " " 12%,	47
12 " " 15%,	22
15 " " 20%,	23
20% and over,	14
Total with increase in cost of manufacture,	297
Without increase,	37
Total establishments,	334

An examination of the above table will show that out of 334 establishments reporting, 37, or 11.1 per cent., experienced no increase in the cost of manufacture from the reduction in hours of labor, together with such changes in wages as in a few cases were made at the same time, while 297, or 88.9 per cent., found that the cost of manufacture was increased, the percentages of advance being from under 3 per cent. to over 20 per cent.

The largest group shown on the above table is the one reporting reductions in working hours per week of from six to seven hours. The whole number so reporting was 184, of which 16 had experienced no increase in cost following the reduction, while 168 had found an increase, the range of which is given in percentages, together with the number of establishments reporting themselves as having sustained increases represented by each of the indicated percentages.

Among the thirty-seven (37) establishments reporting no increase in the cost of production as a result of the reduction in the hours of labor, there was only one in which there had been a decrease (1 per cent.) in the cost of manufacture, which, it was stated, made itself manifest immediately after the reduction in working time.

Another, and a very interesting phase of the investigation, was the one which showed the effect of the reduction in working hours upon the quantity of product per employe.

As in the matter of increase in the cost of manufacture, only those establishments are included in the summary contained in the following table as report changes due entirely to the reduction in hours and wages, and not in any respect to such modifying causes as higher speeded or improved machinery, or any other changes in the methods of work. The figures relating to this aspect of the subject are set forth in the following table:

Reduction in Hours per Week of—	Number of Establishments.
Total number of establishments reporting reduction of hours:	
With no decrease in quantity of product,	31
With a decrease in quantity of product of—	
Under 3%,	2
3 but under 4%,	1
4 " " 5%,	1
5 " " 6%,	19
6 " " 7%,	8
7 " " 8%,	9
8 " " 9%,	16
9 " " 10%,	5
10 " " 11%,	159
11 " " 12%,	47
12 " " 15%,	5
15 " " 20%,	16
20% and over,	12
Rate per cent. not reported,	3
Total showing decrease in quantity of product,.....	303
Total showing no decrease,	31
Total establishments,	334

The above table shows that out of the 334 establishments included, 31, or 9.3 per cent., reported no decrease in the quantity of product as a result of the reduction in working hours and the changes in wages made in a few instances. But, on the other hand, it is shown that in 303 establishments, or 90.7 per cent. of the total number reporting, a decrease in product did result. Of these, 61 establishments, or 20.1 per cent. of the total number, reported decreases ranging from less than three per cent. to nine, but under ten per cent. Of this group, the largest number is found to have experienced a falling off in production of from five to six per cent.—nineteen establishments report this percentage of decrease. The next largest number in this group—16 establishments—reports a reduction of 8 but under 9 per cent. Two hundred and forty-two (242) establishments, or 78.9 per cent. of the total number, report decreases ranging from 10 per cent. to 20 per cent. and over.

A falling off in the quantity of product per employe means, of course, a smaller output and a smaller business for the establishment, unless the same is met and off-set by an increase in the number of employes, an increase in the number of days in operation, or the use of improved machinery or methods of production.

The reports show that 232 establishments, out of the total number (303), had to adopt one or another of these expedients to keep production up to the standard of the times preceding the reduction in working hours; of these, 16 establishments increased the number of employes and also the days of running time; 210 establishments increased the number of employes without changing the days of running time, and 6 establishments increased the days of running time without increasing the number of employes.

The above figures go to show that out of the 396 establishments investigated to find out their experience following the reduction in working hours which they had made, 226, or 57.1 per cent., reported that by reason of a decrease in output under the shorter workday, it had been necessary to increase the number of employes, and included in this number is 16 establishments in which it had been necessary to increase not only the number of employes but the number of workdays in the year as well. In 6 other establishments it was, as stated above, necessary to increase the number of workdays but not the number of employes.

There remain 111 establishments, of which number 37 report no increase in cost of manufacture, and 31 state that there has been no decrease in the amount of production per employe; the remaining 43 establishments report too vaguely on either points to permit their being classified—that is to say, some among them state that cost of production had increased, or the quantity of product per employe had fallen off to a material extent, but no exact figures of percentage relating to either could be given.

How widely different has been the experience of establishments that have reduced the hours of labor is shown by the particulars regarding two cases which are as follows: One of these, an establishment engaged in the manufacture of soap, reduced the working hours of its office force, consisting of 354 employes, from 51 to 48 hours per week, without change in wages. The result was an increase in cost of 11 per cent., and the same percentage of decrease in quantity of work done, which was made up by the employment of more people.

The other is the case of a large shoe manufacturing firm, located in Boston, Mass., where it employs nearly 3,000 people in its factories. The working hours in this great establishment had

been, up to July 1st, 1898, 59 hours per week. A change was made then which brought working hours down to $53\frac{1}{2}$ per week; no change was made in daily wages, and the result was a reduction in the labor cost of one per cent., and at the same time, the product per employe increased $2\frac{1}{2}$ per cent.

In July, 1901, the 48-hour week was adopted at the works with, as in the case of the first reduction in working time, no change in the daily wages. This resulted in an increase of 3 per cent. in cost, owing to a reduction of 8 per cent. in the volume of product per employe. As the works were run 51 weeks during the year, and a larger working force could not be employed, there was no choice but to return to the $53\frac{1}{2}$ -hour schedule, which was accordingly done after having tried the 48-hour week for about one and one-half years. The result of this change, wages remaining the same, was a decrease in the cost of manufacture of 2 per cent., and a 4 per cent. increase in product per employe. The re-establishment of the nine-hour day was requested by a large majority of the firm's employes who worked by the piece.

Both reductions in time were made voluntarily on the part of the company, and without request from anyone. The firm managers reasoned that an active 9-hour day would be superior to a more or less inactive 10-hour day; these expectations were fully justified by the fact that a larger volume of work was turned out, and the workmen averaged larger earnings in 9 hours than they did in 10; there were fewer of them late starting in the morning, and a steadier application to work was maintained during the day than was the case formerly. The successful outcome of this move encouraged the belief that a further reduction in working time would be followed by like satisfactory results; then followed the reduction to 48 hours, which was a disappointment in every respect. Production fell off and the cost of manufacture increased as stated above, and, after a trial of twenty-one months, the 48-hour week was abandoned.

It may have been that the limit of exertion, generally speaking, had been reached by the workmen in compressing the work of ten hours into nine, and that as a body they had not power necessary to carry the reduction of time any further, while at the same time maintaining the volume of product.

The firm managers, however, complained that employes were quite dilatory in getting to work in the morning, and did not, as a rule, show by their conduct that they were inspired to work any more steadily on the eight than on the nine-hour plan; from experience, the conclusion was arrived at that an eight-hour day meant practically from seven to seven and a half hours actual working time. There was, therefore, nothing left to do, in order to keep up production, but provide increased factory space and employ additional working force, or else return to the nine-hour day, which was done after an unsuccessful trial of the shorter day, lasting twenty-one months.

In seventeen establishments, in which working time had been reduced from 56 to 48 hours per week, the records showed that in four of these, wages had actually been increased when the working time was reduced; the percentages of increase were two of 1.8 per cent. each, one of 7.0 per cent., and one of 10.0 per cent.; the other thirteen establishments made no change in wages. The result in this group was that in every one of the establishments the cost of manufacture had largely increased. In four of them, the increases ranged from 4.0 to 9.4 per cent., and the remaining thirteen the percentage of increase ranged from 10.0 to 20.0 per cent.; the average increase for the entire group of 17 establishments is 12.3 per cent. Ten of these establishments met the falling off in production, which averaged 10.6 per cent. for the entire group, by increasing the force of employes, and one remedied the deficiency by increasing the days of running time without changing the hours. The others, apparently, made no move of any kind to improve the conditions brought about by the reduction in the hours of labor.

The experience of another manufacturing firm, following a reduction of working hours voluntarily made, is of sufficient importance to justify its being briefly reviewed here.

The concern in question is engaged in the manufacture of iron and steel forgings, and has its works in Brooklyn, N. Y., and the statement which follows is based on testimony laid before the Industrial Commission in May, 1901, by the treasurer of the company, which was in effect as follows: In the establishment under consideration the working force consists of 250 men;

wages are advanced voluntarily, and there has never been a general demand for more pay by employes, neither has the wages of workmen ever been reduced. Those best acquainted with factory conditions will, however, be most interested in the fact that "piece-work" rates have never been cut down. It is a fixed and unchangeable rule of the firm that piece prices shall not be reduced, for it is deemed neither wise or just to lower them. Not only is this the rule, but men working on the piece-work basis are guaranteed their full day rate of pay if the same cannot for any reason be earned under the prices per piece which they receive.

The point of view taken by the firm in this respect is that, if on piece work a man, by skill and energy, increases his pay even largely, he is entitled to all he gets because his employer economizes on fuel, interest, administration and other important items. It is not fair under these circumstances to cut the workman's profits in order that the employer may gain more; indeed, such a policy is very shortsighted and, in the long run, certain to prove unprofitable.

In the industry under consideration, repairs are an expensive item, and it has been found that a well paid man so cares for the machine he works on as to minimize the need for repairs; if for no other reason, he does this because the time taken for repairs entails a direct loss on himself; nor is such a man apt to waste much material because he cannot do so without a greater or less waste of his own valuable time. Justly paid men also save by doing comparatively little imperfect work, and piece workers under this system willingly replace, at their own expense, work that is bad through their fault, and pay the cost of material that may be wasted in this way. Thus, saving and profiting as he does in many ways, and getting large advantages from the increased output, common justice to the workman demands that the piece-work rate shall not be cut merely because he too profits well.

In this establishment, after consultation with the leading workmen, notice was given that the working time would be reduced to nine hours, with ten hours pay, running 54 hours weekly for the wages heretofore paid for 60 hours. This concession, made unasked, was received gratefully by the men, who have shown

their appreciation by working closely up to the full nine hours. Experience has shown the change to be profitable, and the output of the works is slightly larger than before. A comparison of a large number of orders executed on the nine-hour basis with a like number of orders for the same goods executed under similar conditions on the ten-hour basis shows a distinct average gain in favor of the nine-hour day.

There is a slightly larger average output for the nine than for the ten-hour day, and there is throughout an increased rate of hourly and daily output under the shorter as compared with the longer working time.

Quoting the exact words of the officer of this company, in his testimony before the Industrial Commission, the results of the reduction in working time and other measures of justice adopted by the firm in dealing with its employes are thus summarized:

"The nin-hour day has been a gain and not a loss demonstrably so where exact data can be had, and satisfactorily so even where the full details cannot be secured. This result depends in large degree upon the willing and helpful spirit that exists in the works, but it cannot be depended on that similar results can be everywhere had, because the conditions elsewhere prevailing may not be the same.

"Such success as has been attained in this establishment arises from just wages paid to employes and a recognition by the company of the intelligence, efficiency, and, last but not least, the good-will of its working force."

The sentiments here expressed are in the highest degree commendable from both the moral and material standpoint, as while it is difficult to estimate exactly the difference in production in the same works between a force of men justly treated, earnest, zealous and faithful in their work, and a similar body of workmen who labor under hard and unjust conditions merely because they must live, but those familiar with industrial management well know that the difference between these two may be that between ruin and dividends.

The answers of New Jersey manufacturers to the specific inquiries contained in the schedule are shown in full in the following table:

Changes Accompanying Reduction of Hours.

INDUSTRIES.

Hours Worked
per Week.

Year Hours were Reduced.

Average Number of
Employees.

Before Reduction.

After Reduction.

In Daily Wages,
Per Cent.In Cost of Manufacture,
Per Cent.In Quantity of
Product, Per Cent.Due Wholly to
Change of Hours
and Daily Wages.Number of
Employees.

Necessary to Increase

Days of Run-
ning Time.

Agricultural implements,	1901	75	60.0	54.0	.....	.....	7.0	10.0	Yes.....	No.....	Yes.
Boiler making,	1899	150	59.0	53.0	.....	10.0	2.5	6.8	Yes.....	No.....	No.
Boots and shoes,	1900	450	59.0	55.0	.....	2.5	3.5	8.0	Yes.....	No.....	Yes.
Boots and shoes,	1904	150	59.0	55.0	.....	3.2	3.2	8.3	Yes.....	No.....	No.
Boots and shoes,	1903	112	60.0	55.0	.....	7.0	10.0	8.0	Yes.....	No.....	Yes.
Carriages and wagons,	1904	175	59.0	54.0	.....	5.8	.....	.....	Yes.....	No.....	No.
Clothing,	1903	425	59.0	53.8	.....	.....	.....	.....	Yes.....	No.....	No.
Cutlery and edge tools,	1903	100	59.0	50.0	.....	4.5	.....	.....	Yes.....	No.....	No.
Foundry and machinery,	1903	350	59.0	55.0	.....	7.0	.....	8.5	Yes.....	No.....	No.
Foundry and machinery,	1902	300	59.0	54.0	.....	3.5	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1901	250	60.0	54.0	.....	4.4	.....	10.0	Yes.....	No.....	Yes.
Foundry and machinery,	1901	200	59.0	54.0	.....	5.2	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1901	140	60.0	54.0	.....	3.9	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1901	130	60.0	54.0	.....	10.0	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1903	120	59.0	54.0	.....	10.0	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1901	115	60.0	54.0	.....	.....	.....	.....	Yes.....	No.....	No.
Foundry and machinery,	1901	100	60.0	54.0	.....	.....	.....	.....	Yes.....	No.....	No.
Foundry and machinery,	1901	90	59.0	54.0	.....	5.0	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1901	65	60.0	54.0	.....	10.6	.....	10.0	Yes.....	No.....	No.
Foundry and machinery,	1903	60	59.0	54.0	.....	6.5	.....	11.5	Yes.....	No.....	No.
Foundry and machinery,	1899	50	59.0	54.0	.....	3.7	.....	10.0	Yes.....	No.....	No.
Gas and electric light fixtures,	1903	35	60.0	54.0	.....	11.2	.....	6.0	Yes.....	No.....	No.
Glass,	1899	700	54.0	51.0	.....	5.0	.....	15.0	Yes.....	No.....	No.
Glass,	1902	175	60.0	51.0	.....	12.6	.....	9.1	Yes.....	No.....	No.
Hats and caps,	1902	350	55.0	50.0	.....	9.9	.....	15.3	Yes.....	No.....	No.
Hats and caps,	1903	150	59.0	50.0	.....	7.5	.....	8.5	Yes.....	No.....	No.
Hats and caps,	1899	100	59.0	55.0	.....	5.5	.....	10.0	Yes.....	No.....	No.
Iron work,	1903	225	59.0	53.5	.....	1.3	.....	5.0	Yes.....	No.....	No.
Jewelry,	1903	200	59.0	54.0	.....	4.5	.....	10.0	Yes.....	No.....	Yes.
Jewelry,	1902	120	60.0	54.0	.....	5.7	.....	10.0	Yes.....	No.....	Yes.
Jewelry,	1902	90	60.0	54.0	.....	3.7	.....	10.0	Yes.....	No.....	No.
Jewelry,	1902	88	60.0	54.0	.....	.....	.....	.....	Yes.....	No.....	No.

THE EIGHT-HOUR MOVEMENT.

INDUSTRIES.	Average Number of Employees.	Year Hours were Reduced.	Hours Worked per Week.		In Daily Wages, Per Cent.	In Cost of Manufacture, Per Cent.	In Quantity of Product, Per Cent.	Due Wholly to Change of Hours and Daily Wages.	Number of Employees.	Days of Running Time.	Necessary to Increase
			Before Reduction.	After Reduction.							
Jewelry.	52	1903	60.0	54.0	..	++	10.0	Yes.	Yes.	Yes.	
Jewelry.	53	1902	60.0	54.0	..	++	7.0	Yes.	No.	No.	
Jewelry.	60	1900	59.0	53.0	..	++	5.0	Yes.	Yes.	No.	
Leather.	165	1902	60.0	54.0	..	++	8.5	Yes.	Yes.	No.	
Novelties.	808	1902	57.0	53.0	..	++	7.0	Yes.	Yes.	No.	
Ornament.	160	1902	60.0	54.0	..	++	10.0	Yes.	Yes.	No.	
Planing mill products.	200	1897	54.0	44.0	..	++	12.0	Yes.	Yes.	No.	
Planing mill products.	60	1901	54.0	48.0	..	++	11.1	Yes.	Yes.	No.	
Plumbers' supplies.	70	1903	53.5	54.0	..	++	4.0	Yes.	Yes.	No.	
Printing and publishing.	100	1901	53.0	53.0	..	++	3.2	Yes.	Yes.	No.	
Printing and publishing.	95	1904	53.0	54.0	..	++	10.0	Yes.	Yes.	No.	
Refrigerators and meat blocks.	50	1903	60.0	54.0	..	++	3.0	Yes.	Yes.	No.	
Saddlery hardware.	100	1903	53.0	55.0	..	++	7.0	Yes.	Yes.	No.	
Silverware.	355	1903	53.0	55.0	..	++	3.7	Yes.	Yes.	No.	
Silverware.	150	1902	60.0	54.0	..	++	16.9	Yes.	No.	Yes.	
Silverware.	75	1902	60.0	55.0	..	++	5.5	Yes.	No.	Yes.	
Worsted goods.	350	1902	60.0	48.0	..	++	7.5	Yes.	No.	No.	

An examination of the foregoing table shows that 51 establishments, employing, at the time the inquiry was made, 7,070 operatives, are included in the presentation. Of these, the earliest reduction in working hours occurred in 1897, there being one establishment reporting that date; 1899 shows four reductions; 1900, one; 1901, twelve; 1902, twelve; 1903, seventeen, and 1904, four.

Twenty establishments report the hours of labor before reduction as 60 per week, 25 establishments report 59 hours, and the remaining six establishments report working hours of from 55 to 57. The working time as fixed after the reduction varies from 44 to 55 hours per week, the majority being from 53 to 55 hours. Only three establishments report having made any change in wages following the reduction in working time; in two of these, wages were decreased 10 per cent., and in the other, an increase of twenty per cent. in piece prices is reported. With one exception, every establishment included in the presentation reports increases in the cost of manufacture, the percentage ranging from a little more than one to nearly seventeen per cent., and the same establishments report a falling off in product as having followed immediately after the reduction, the percentages ranging between five and twenty.

With only a few exceptions, this state of affairs is reported as having grown directly from the change in working hours, and the deficiency in production, in all but a few instances, was met by increasing the number of employes or the number of working days.

Health Conditions of the Leather Industry.

1906.

The conversion of "green" skins or hides into tanned, curried and finished leather is an industry which occupies a high position in the front rank of New Jersey manufactures. In the great manufacturing city of Newark it is first in importance among the hundreds of flourishing trades that have made that town famous as the home of the widest range of industrial activities to be found anywhere in the United States, or possibly in the world.

Ninety-five per cent. of the leather industry in New Jersey is concentrated in the city of Newark, where all the larger establishments engaged in the trade are found. Throughout the State at large the manufacturing census made by the Bureau of Statistics for the year 1905 shows that there were fifty-nine establishments engaged in the industry, which represented an invested capital of \$12,696,072. The average number of wage earners employed was 4,851; the amount paid in wages to wage earners, \$2,773,818; the value of material used, \$14,791,924; the value of products, \$20,967,669; the number of salaried officers and employes engaged in the fifty-nine establishments, 341, and the amounts paid them in salaries, \$495,939.

These figures show the industry to be a large one, but the purpose of this paper being to discuss the health conditions surrounding workmen employed in the factories and buildings in which it is carried on, as these have been ascertained by a special inquiry conducted by the Bureau, the business side of the question as presented in outline above, is introduced merely to show the large financial interests involved, and also to indicate the number of operatives whose life work is associated with the trade, and whose daily labor is performed under such health disturbing influences as may be necessarily associated with its several processes.

These processes are numerous, and to insure satisfactory results requires care and intelligence on the part of the workmen by whom they are performed. The work in some departments or branches is of a laborious kind, requiring for its successful performance a certain degree of physical strength and a capacity for endurance on the part of workmen engaged in the business.

In addition to these qualities, an exact knowledge of all the details of treatment must be possessed by operatives employed in most parts of the work in order to guard against disaster, as even the slightest degree of inattention or a mistake made through ignorance on their part may result in the practical destruction of the skins or hides under treatment. Indeed there is scarcely an operation performed in a tanning establishment of which this may not be truthfully said. The business to be successfully carried on is one requiring an exact observance of formulas in every detail of manufacture. Almost every operation in a tannery is specialized and the workers in each of them are trained to a high degree of expertness in their several lines of work.

This inquiry into the health conditions of the trade was made in pursuance of a plan adopted several years ago, by which one occupation is to be made the subject of investigation in each annual report until at least all the leading ones have been reviewed for the purpose of showing the existence of such health affecting and accident producing factors as may be severally peculiar to them. To obtain the necessary data, the same course was pursued as in previous investigations of like character.

Blanks containing the questions required for bringing out the information desired were sent to all owners of leather manufacturing establishments and personal visits were made by a competent investigator to a number of factories that were regarded as fairly representative of the conditions prevailing in the trade so far as the construction of buildings and the arrangements provided in them for the comfort and protection of employes were concerned.

A similar line of questions was addressed to operatives who had had the experience of many years employment in the trade, and the conclusions—based on information derived from all sources, employers, workmen and personal observation, regarding the extent of liability to ill-health or accidental injury to

which persons who follow this occupation are necessarily subjected—will be found in the tables which contain a tabulation of the specific answers returned by employers and workmen to the questions addressed to them, respectively, through the medium of the blank.

These are the questions that were addressed to the tannery owners:

1. Name of firm.
2. Location of factory.
3. Average number of employes.
4. Number of deaths from all causes during the year.
5. Number of fatal accidents during the year.
6. Diseases, if any, that are peculiar to the industry.
7. Branches of the industry, if any, that are considered unhealthy.
8. Principal ill-health producing factors.
9. Number of employes absent on account of sickness during the year.
10. Branch of the industry in which liability to accident is greatest.
11. Principal accident producing factors.
12. Intemperance among employes of common or rare occurrence.
13. Nationalities of non-English speaking foreigners employed in the establishment.
14. Improvements introduced during recent years tending to lessen disease and accident liability.

Thirty of the fifty-nine firms to whom the blank was sent returned them with all questions answered, but in many cases not with the fullness that was desired, having in view the comprehensive presentation of the subject which was intended.

The blank addressed to workmen contained many questions similar to that provided for the owners, and in addition thereto others which afforded them an opportunity to report fully such information, having a bearing on the purpose of the inquiry, as from years of familiarity and practical experience with the work they were well qualified to give. The questions particularly addressed to individual workmen called for the following details: The length of time they had worked continuously at the business;

age at the time of inquiry; number of hours worked per week under normal conditions; the nature of such cases of sickness as had occurred among their fellow workmen during the year, and the number that had been accidentally injured during the same period. Workmen to whom the blank was sent were requested also to give their individual opinions regarding the influence of the general factory environment upon the health of operatives, and especially they were asked to state how their own had been affected by the processes of the particular branch of the industry in which they were then, or had been at other times engaged.

Among the large number of returns received from workmen there is a most remarkable agreement in the statements relating to ill-health and accident producing factors, all of which amount in effect to a declaration that while undoubtedly most departments of the tanning industry have their own particular drawbacks—some more disagreeable than others—yet experience has proven that none of them are really a menace to health.

The ages of the men who made these reports, and their present vigorous physical condition, seem to afford the most unquestionable evidence in support of the claim that the occupation is not injurious to health—many of them being past sixty years of age, and few below fifty, with terms of service in the industry to their credit ranging from twenty to forty years.

In making its transit through the tannery to the warehouse the green skin or hide is passed through many operations. The first of these is "salting" to guard against decomposition, in which state the hide is allowed to remain for from one to two weeks; next is an immersion in water for one week to extract the salt, after which it passes to the lime vats, where the hide lies four or five days for the purpose of loosening the hair. The "beam house," where it is subjected to the unhairing process, receives it next, after which the hide is given another lime treatment lasting from three to five days. "Fleshing," that is to say, scraping off such particles of flesh as may have been left on the inside when the pelt was taken off, is the next operation, after which it is sent to the pit to receive its first tanning. This is followed by a treatment for the removal of surface scratches, after which comes the splitting machine, which converts it into whatever number of "splits" the thickness of the hide will warrant.

After receiving a second tanning, and passing through the "scouring house," the split is "tacked" on large frames and left to dry. When thoroughly dry, a softening treatment follows, after which the piece goes to the japanning department, where it is japanned, glazed, and grained, the last named process being the final mechanical operation in the production of finished leather.

These details of manufacture will help to an understanding of the several branches of the industry, particularly where referred to as dangerous to health or productive of accidental injury to operatives employed upon them. In this connection it may be well to say that statements relating to ill-health or accident liability, where reported as existing, are to be regarded in a comparative sense only, that is to say, both masters and men agree in denying that any branch of the industry is either injurious to health, or, with the exercise of even the most ordinary care, productive of accidents. Some operations are, however, admitted to involve slight risks where there is imprudence or carelessness, and these are the branches designated as unhealthful, etc., in the tables, which should be read in the light of this explanation.

Twenty-five of the establishment reports are from firms whose works are located in the city of Newark, and one each from Elizabeth, Hoboken, New Durham, Waverly and Merchantville. The collective force employed in the thirty establishments is 3,491 persons, or about seventy-two (72) per cent. of the total number employed in the industry throughout the State, a proportion certainly large enough to justify the claim that if absolutely all were included the returns would not shed any additional light on the subject of the inquiry, or be more correctly representative of the health and accident conditions of the industry.

That the reports on which these tables are based have back of them a knowledge and authority derived from many years experience is shown by the number of years a large majority of the establishments considered have been engaged in the industry.

As shown on Table No. 1, five of these plants have had a continuous existence for periods ranging from forty-three (43) to sixty-eight (68) years; nine have been running without an interval of suspension for between twenty (20) and thirty-nine (39)

years; twelve are in operation from ten (10) to eighteen (18) years, and the remaining four for from two (2) to nine (9) years.

On this table are also given the nationalities of non-English speaking workmen employed in such establishment, but although efforts were made to secure an accurate count of this class of operatives it was found impracticable to do so.

Eleven of the thirty plants from which reports were received indicate Germans as the only class of foreign born operatives in their employment, and these almost without exception speak the English language. In the other nineteen establishments it appears from the statements made by such of them as have reported on the subject, Italians, Russians, Polacks and Hungarians are found in fairly large numbers; these men have, generally speaking, a knowledge of the language sufficient to make themselves understood, and are for the most part engaged in the more disagreeable operations of the business.

Table No. 2 gives in detail the replies made by employers to the inquiries as to the diseases and ill-health producing factors peculiar to the industry; the number of employes absent from work on account of sickness; the number who died from natural causes during the year; and the branches of the industry that are regarded as unhealthful.

Answering the first of these questions—"diseases peculiar to the industry"—twenty-four (24) owners of establishments report positively that they "know of none;" two neglected to make any statement on the subject; one says the "trade is generally regarded as healthful;" another, that "none are markedly so," which may be taken to mean that in the writer's judgment working at the tanning trade involves no more or no less than the common average liability to disease encountered outside of it. Only two firms admit the existence of disease liability in any form. One mentions a "slight disarrangement of the bowels from inhaling the fumes of turpentine and naphtha," and the other "rheumatism and colds from continual wetness," but both add the qualifying phrase "if any" to their statement.

Necessarily, in view of this general denial of the existence of diseases peculiar to the industry, replies to the second question, which calls for the "ill health producing factors peculiar to the

industry" are in effect to the same purport; six firms, however, admit that there are such and particularize them as follows: "dust and dampness," "dampness and bad air," "material used in dyeing," "high temperature in drying room," "continuous dampness in scouring room," and "inhaling naphtha fumes in the japaning department." The others—twenty-four (24) in number—agree in declaring that there are no ill-health producing factors in any of the processes of the industry, or at least none that they have ever observed.

Regarding the third question—"number of employes absent from work on account of sickness during the year,"—the table shows that four firms failed to report on that subject, presumably because, as stated by two of them, "no record" was made of such cases at the works.

The remaining twenty-six (26) establishments report between them an aggregate of sixty-nine (69) workmen who were absent from duty on account of sickness during the year for periods ranging from two days to several weeks.

The total average number of employes in these establishments during the year covered by the inquiry was 2,964; the number of these, sixty-nine (69), who were at some time too ill to work represents a percentage of only 2.3 of the entire working force; an exhibit which will compare favorably with that of any other in-door occupation. But remarkably low as is the percentage of sickness, that of the deaths among men engaged in the trade is still more surprising by reason of its smallness.

Of the thirty establishments considered, only five report the occurrence of death among employes, one each in four, and two in the fifth; twenty-one firms had no deaths, and four made no report or stated that they "kept no record." Excluding the 615 employes of these four plants from the total, there remain 2,876 workmen employed in the twenty-six establishments from which reports on the mortality among operatives were received, and among that number, as shown by the table, there were but five deaths, or 0.17 per cent. of the total force employed during the year—a proportion far below the general average death rate of adult males following the miscellaneous occupations of industry.

As a matter of course, under the favorable circumstances referred to above, it is not surprising to find that as shown by the

table in answer to the question—"what branches of the industry are considered unhealthful," twenty-four (24) of the thirty establishments declare that "none is so regarded." The others answer the question as follows: "Japanning, if any," "japanning is nearest to being unhealthful," "japanning," "beam work, because of exertion required," "dyeing department," and "scouring room."

Table No. 3 presents the accident liability to which employes in the tanning industry are subject as the same are reported by owners of the thirty establishments under consideration; statements will also be found from them relating to improvements introduced in their respective establishments during recent years for the purpose of diminishing the ill-health and accident liability of employes. Their observations are also given on the habits of their men in the use of strong drink.

Answers to the question "in what branch of the industry is liability to accident greatest" show some diversity of opinion on the subject, although there appears a general agreement that whatever risks of that character there may be are confined to the departments or branches of the business in which machinery of any kind, including keen edged tools are used, and the careless handling of these by workmen is, with substantial unanimity, declared to be the principal if not the only real accident producing factor known to the industry.

A few name the japanning department with its naphtha and other inflammable materials as being the most dangerous, but there seems to be a general agreement reflected in all answers to these questions, that with care in the handling of material and tools and by a strict observance of rules, including the utilization of such safeguards as are provided, workmen in all branches of the industry may enjoy practical immunity from accidents of a serious character.

That these precautions are effective and also that all possible and necessary care has been exercised by workmen is shown by the fact that among 3,491 employes only four suffered anything more than the most trivial injuries during the year.

Regarding the drinking habit, an examination of the table shows that eight employers report intemperance among employes as being "prevalent to some extent, but not common," two re-

port it as "common," another that it is "common in some branches, not in others," and eighteen of the total number agree in using the emphatic expression that intemperance in any degree among workmen employed by them respectively is "rare." In some of these establishments there are rigidly enforced rules which provide immediate discharge from employment as the penalty of intoxication.

A review of the answers returned to this important question shows that in eighteen establishments employing 2,019 workmen, or 57.8 per cent. of the total number considered, intemperance is "rare;" in ten establishments, employing 1,210, or 34.7 per cent. of the total number, the habit is "prevalent but not common," and only in two establishments employing 262, or 7.5 per cent. of the total number, is intemperance so prevalent as to justify its being characterized, in the employer's estimation, as "common."

This brief analysis of Tables Nos. 1, 2 and 3 covers all the information furnished by employers relating to the subject matter of the inquiry; that contributed by the workmen in reply to substantially the same questions as those answered by employers will be found in Tables Nos. 4, 5 and 6 of the series.

Conclusions reached through an investigation of this character could not be regarded as final if the information, however conscientiously given, reflects only one point of view. It is no reflection on the owner or manager of an industrial establishment to say that the details of business relating to production of profits receive more attention than those which, apart from that question, concern only the physical well being of the employe. The workman's trials are, for the most part, viewed through the office window and often the purpose of such closer scrutiny as he may receive is to note, not how his health is being affected by work, but rather how nearly the product of his labor is in proportion of the wages paid. Of his illness or death there is often "no record" save that which is incidental to a deduction of wages for lost time in one case, and in the other the substitution of a new name for his own on the pay roll.

Often the fear of discounting his own value and imperiling his hold on employment makes a workman suspicious of the purpose back of inquiries regarding health, particularly if these emanate from the office; he is more disposed to belittle than to

magnify such inroads as may result from work, believing that his standing for efficiency is better maintained thereby; but under the seal of secrecy, if the request comes from any other quarter, the average workman may generally be depended upon to talk freely on the subject of his health, and give such information relating thereto as may be desired.

This phase of the case received all necessary attention in connection with the present inquiry. Many representative workmen, who had years of experience in the principal branches of the industry, were interviewed and statements from them covering substantially the same details of trade experiences as those furnished by the employers. These men were selected because of their age, number of years service at the trade, and ability to tell their experience intelligently.

From the nearly two hundred obtained from this source thirty, or one from each of the establishments considered in the first three tables, has been selected to supplement the employer's statements relating to the industry. The advantage of this course lies in the fact that both versions—the employer's and the workman's—are thus presented for each establishment, and so remarkably similar are the conclusions set forth in all of them regarding the main points of the inquiry that this group of statements is perfectly representative of the larger number.

Table No. 4—reports by individuals—gives the branch of the industry in which employed, the workman's age at the time of making the statement, number of years employed in the business, average number of persons employed in the same establishment during the year 1905, and the average number of hours worked per week under normal conditions.

The "beam house" and graining branches of the industry are represented by eight reports each; "tacking" by two; "splitting" by two; "japanning," one; "softening," one; "dye house," one; "glazing," two; "scouring," one; and "buffing," two.

In the matter of age and experience, these men are eminently well qualified to speak with authority on all matters relating to the shop phase of the industry so far as health conditions are concerned. Five of them are past sixty years of age, and have worked continuously at the trade for periods ranging from twenty to forty-five years; eleven are between fifty and sixty

years, and have worked at the business without a break for from sixteen to thirty-two years; twelve are from forty to fifty years of age with an unbroken record of service extending over from fifteen to twenty-five years, and only two of the total number, a little less than forty years old, have been employed in the industry for ten and eighteen years, respectively.

The average age of the group at the time of making the report was 49.1; the average time worked at the industry was 26.3 years, and the average age at which they began working at the trade was 22.8 years.

A fact well known to sociological investigators is that while dangerous occupations, that is to say, those in which, like railroading, there is an almost ever present liability to serious accidental injury, do not repel men purely because of the risks involved, unhealthful trades are generally avoided and when taken up under the pressure of necessity are usually abandoned when employment of a more satisfactory character is found. That being the case, it would seem to follow logically that long service of operatives in an industry is—if not proof—at least good evidence of its being fairly free from influences inimical to health.

Taking into consideration the figures given above relating to average age, number of years continuous service, etc., of this group of workmen, the leather industry seems to be safe from even the mildest form of indictment, when its health conditions are judged by this standard.

The number of hours worked per week, although only distantly related to the subject of the inquiry, is also given on this table for each establishment; of these, thirteen work sixty hours, nine work fifty-nine hours, five work fifty-five hours, and three fifty-four hours. The sixty hour group are employed a level ten hours per day, the fifty-nine and fifty-five hour groups the same, with one and five hours off respectively on Saturday; the other three establishments have a uniform workday of nine hours.

Table No. 5 contains the substance of the views expressed by workmen on the "branches of the industry that are considered the nearest to being unhealthful," the "diseases said to be peculiar to the industry," the "principal causes of unhealthfulness," the "number of employes absent from work on account of sickness during the year," the "character of such cases of sickness," and

the "number of deaths of employes from all causes during the year."

In answer to the first of these questions, twenty-three workmen state that no branch of the industry is considered unhealthy, and the other seven indicate certain features of the "beam house" work as coming nearest to warranting that designation.

Replies to the second question show emphatic declarations from the workmen to the effect that there are really no diseases of any kind which may be said to be peculiar to the industry or traceable to it in any way; eleven have made no report either way upon the subject; and nine indicate a "liability to rheumatism and colds" as the diseases, and wet floors with a condition of continuous dampness, which seem to be unavoidable in some departments of the industry, as the principal cause which produces them. On two reports, mention is made of "indiscreet indulgence in strong drink" as one of the causes most productive of ill-health among operatives.

It is admitted in many of the statements that beer in quantities is freely used by the workmen in some of the tanneries during working hours; but the indulgence, except in these two instances, is said to be neither immoderate nor harmful. Work in many departments of the industry is of a kind requiring almost incessant physical exertion, under the strain of which the mild stimulation derived from an occasional drink of beer is found to be helpful, and the two reports referred to above are alone in attributing to the habit consequences of a serious character.

The number of cases of illness of operatives that were serious enough to cause the victims a loss of time is numerically greater in the workmen's than in the employers' reports, and the record of deaths also is very much greater.

The apparent difference in these respects, however, is explained by the fact that, as before noted, no official records of sickness or deaths are kept in many establishments, while such occurrences would be unlikely to escape the memory of fellow workmen because of the close intimacy and more or less real sentiment of mutual interest and fellowship which generally exists among men in the same employment. There is also the fact that these individual or workmen's reports are based on returns from the entire thirty establishments considered in the inquiry, and include

their total aggregate working force of 3,491 operatives, while the returns by owners, as shown on Table No. 2, are from only twenty-six establishments employing a total of 2,964 workmen.

The percentages, however, show no material difference in the returns from both sources; the individual reports on Table No. 5 shows 100 cases of sickness out of 3,491 employes, which is 2.8 per cent. of the whole number; the owners' statements, which appear on Table No. 2, indicate 69 cases of illness among 2,964 operatives, which is 2.3 per cent. of that total.

The workmen's and the employers' versions of the number of deaths which occurred among operatives during the year shows a very wide difference both in absolute numbers and percentages. In the employers'—among 2,876 operatives only 5, or .17 per cent. of the total, are reported as having died, while the workmen's statements show the number of deaths for the same period to have been 26, or .66 per cent.

Table No. 6, the last of the series, gives the workmen's judgment regarding the "branches of industry in which liability to accident is greatest," the "principal factors in the production of accidents," the "principal causes of accidents," the "number who were accidentally injured," the drinking habits of their fellow workmen, and such factory improvements as have been made during recent years to lessen liability to accident and illness.

The operations of "glazing" and "splitting," either singly or in combination, are the only ones named in which accidents may happen, and "machinery" and "splitting knives" are the only factors through which they occur. As to the causes of accidents, all agree in attributing such as do occur from time to time to carelessness only.

The operation of whetting or sharpening the splitting knives, which is performed while they are in position for use and repeated frequently in order to maintain the keenness required for efficient work, is responsible for many mishaps in the form of gashes of the fingers and hands; these injuries, however, while often severe and painful enough to prevent a man working for some time, are seldom sufficiently serious to warrant their being classed as dangerous.

Regarding the drinking habits of workmen employed in these thirty establishments, Table No. 6 shows that there is a substan-

tial agreement between these reports and those of the factory owners, which appear on Table No. 3. Four of them have not reported on the subject at all; twenty-three state in varying phraseology that intemperance is "rare," and three admit that the habit is rather "common."

The only positive statements secured relating to factory improvements made during recent years for the purpose of lessening liability to accident or sickness go far toward affirming the correctness of statements previously reviewed that "general and continuous dampness" in some departments is the principal, if not the only cause of illness in tanning establishments. There are five answers of this character, and the improvements indicated were all directed toward increasing the efficiency of drainage arrangements and keeping the floors dry. One report states that the factory has been in fairly good condition for years back; another, that "the building occupied is a new one" and "has all improvements;" and still another that "none seems to be required."

Five reports are to the effect that nothing has been done in the way of improvements, and seventeen have neglected making statements of any kind on the subject.

This concludes the analysis of the tables, and it seems reasonably apparent that, all the evidence taken into consideration, the question of unhealthfulness is disposed of in a manner favorable to the reputation of the trade. It is admitted, however, that men employed in tanning, like others working in industries that make extensive use of animal substances, are sufferers in some slight degree from the offensive effluvia given off, which medical science classifies with the morbid agents liable to produce certain diseases originating in filth which are said, theoretically, at least, to exist. But, although thorough examinations have been made to determine the effect of offensive odors in the factories or about the neighborhoods in which they are operated, the only conclusion reached regarding any one occupation has been of an entirely negative character. No special unhealthfulness could be traced to foul smells, although there is authority for believing that such offensive vapors may cause something in the nature of a deterioration of the general health of those who inhale them, and thus bring about conditions that may be favorable to the development of contagious diseases. But, certainly so far as the

large group of workmen employed in the thirty establishments included in this inquiry is concerned, it may be positively stated that no effect on their health of a character even remotely unfavorable has been brought to light; all reports agree that they soon become accustomed to the odors and cease to be in any way annoyed by them.

There is no doubt as to factory legislation, the result of enlightened public sentiment, coupled with a knowledge of preventative measures, having accomplished much toward changing for the better many of the circumstances and conditions of manufactures generating noxious odors, or using material in the process of manufacture from which disagreeable smells are emitted.

These changes have taken the form of improvement in buildings, the introduction of contrivances for consuming gases, and the observance of greater care for securing cleanliness, both in factory buildings and the processes carried on within them.

Leather tanning is probably the most conspicuous of the industries to which disagreeable effluvia is markedly peculiar, and notwithstanding the fact that in large cities, at least, everything possible has been done to mitigate this disagreeable feature, enough still remains to justify its being regarded as obnoxious on that account. But that the trade is not unhealthful is satisfactorily shown by the conclusions drawn from this inquiry. Nor does its operations seem to cause a dangerous degree of physical exhaustion, although work in most of the departments involves a considerable amount of exertion which appears to be very trying to the workman's strength, besides which most of the processes keep such clothing as he wears constantly wet from the use of water.

The trade is nowhere referred to by medical journals as dangerous to health, nor is it found so listed in any of the scientific publications which make a specialty of investigating and analyzing the diseases and mortality of occupations. In only one work of this character—Arlidges' "Hygiene of Trades," published in London, England, in 1902, is it briefly referred to as "disagreeable" only, and that solely because of the odors arising from the principal and subsidiary materials used in the business.

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Location of Works, Branch of Business Carried On, Year When Establishment Was First Opened, Average Number of Persons Employed, Nationalities of Foreign Workmen, Etc.

TABLE No. 1. REPORTS BY ESTABLISHMENTS.

Establishment Number.	LOCATION OF FACTORY.	BRANCH OF BUSINESS CARRIED ON.	Year When First Established.	Number of Years the Establishment has been in Operation.	Average Number of Persons Employed During the Year 1905.	Nationalities of Non-English Speaking Foreigners Employed in the Industry.
1	Elizabeth	Harness Leather	1837	68	335	German.
2	Newark	Carriage, Patent and Enameled Leather	1840	65	300	German.
3	Newark	Carriage, Furniture and Shoe Leather	1856	49	35	German.
4	Newark	Patent and Enameled Leather	1860	45	200	Hungarian, Polish and German.
5	Newark	Patent and Enameled Leather	1862	43	250	German and Polish.
6	Newark	Tanning Hides and Splits	1866	39	20	German.
7	New Durham	Preparing and Finishing Buckskin	1868	37	10	German.
8	Newark	Patent and Enameled Leather	1870	35	250	German and Polish.
9	Newark	Leather—branch not given.	1870	35	125	German.
10	Newark	Leather—branch not given.	1878	27	12	German.
11	Waverly	Patent Leather	1879	26	100	German and Hungarian.
12	Newark	Alligator Skins	1880	25	50	German and Polish.
13	Newark	Buffing Leather	1884	21	14	German and Russian.
14	Newark	Patent and Enameled Leather	1885	20	200	German, Hungarian and Polish.
15	Newark	Glazed Kid	1886	19	283	German, Italian and Polish.
16	Newark	Carriage Leather	1887	18	50	Austrian and Russian.
17	Hoboken	Leather—branch not given.	1888	17	200	German and Swedish.
18	Newark	Bag, Pocketbook and Furniture Leather	1889	16	40	German and Swedish.
19	Newark	Bookbinding and Bag Leather	1889	16	60	None Reported.

20	Newark	Shoe Leather	1889	16	125	None Reported.
21	Newark	Leather—branch not given.	1891	14	220	German.
22	Newark	Hat Leather	1891	14	40	German and Polish.
23	Newark	Calf, Goat and Sheep	1892	13	70	German.
24	Newark	Patent Leather	1892	13	150	German, French, Italian, Hungarian and Polish.
25	Newark	Shoe and Carriage Leather.	1894	11	35	German.
26	Newark	Carriage Leather	1895	10	75	German.
27	Newark	Patent and Enameled Leather.	1896	9	65	German.
28	Merchantville	Glazed Kid	1898	7	150	German and Russian.
29	Newark	Buffings—Colored Leather	1901	4	50	None Reported.
30	Newark	Bag and Book Leather.	1903	2	12	German.

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Diseases Peculiar to the Industry ; Ill-health Producing Factors ; Number of Employees Sick ; Number of Deaths ;
Branches Regarded as Unhealthful.

TABLE No. 2. REPORTS OF ESTABLISHMENTS.

Establishment Number.	DISEASES PECULIAR TO THE INDUSTRY.	ILL HEALTH PRODUCING FACTORS PECULIAR TO THE INDUSTRY.	Number of Employees Absent From Work on Account of Sickness During the Year 1905.	Number of Deaths From Natural Causes During the Year 1905.	Branches of the Industry that are regarded as unhealthful.
1	Know of None.....	Know of None.....	No Record	No Record.....	None so regarded.
2	None—Generally regard- ed as healthy.....	Know of None.....	3 for a short time	None	Japanning, if any.
3	Know of None.....	Know of None.....	None	None	None so regarded.
4	Know of None.....	Know of None.....	5 for a few days.	No Record.....	None so regarded.
5	Know of None.....	Know of None.....	12.	2	Japanning is nearest.
6	Know of None.....	Know of None.....	3.	None	Not Reported.
7	None Markedly So.....	Dust and Dampness.....	2.	None	Beam Work—Because of the exer- tion required.
8	Know of None.....	Dampness and Bad Air.....	None	None	None so regarded.
9	Know of None.....	Know of None.....	5.	None	None so regarded.
10	Not Reported.....	Know of None.....	None	None	Not Reported.
11	Know of None.....	Know of None.....	None	None	None so regarded.
12	Not Reported.....	Materials Used in Dyeing.....	2.	Not Reported.....	Dyeing Department.
13	Know of None.....	Know of None.....	None	None	None so regarded.
14	Know of None.....	Know of None.....	7.	1	None so regarded.
15	Know of None.....	Know of None.....	3.	None	None so regarded.
16	Know of None.....	Know of None.....	2.	None	None so regarded.
17	Know of None.....	Know of None.....	3.	None	None so regarded.
18	Know of None.....	Know of None.....	3.	1	None so regarded.
19	Know of None.....	Know of None.....	None	None	None so regarded.

20	Know of None.....	Know of None.....	Not Reported.....	None	None so regarded.
21	Know of None.....	Know of None.....	2.	1.	None so regarded.
22	Know of None.....	Know of None.....	2.	None	None so regarded.
23	Know of None.....	Know of None.....	3.	None	None so regarded.
24	Slight Disarrangement of Bowels—from Turpen- tine vapors	High Temperature in Drying Ovens.....	3.	None	Strictly Speaking, none so regarded.
25	Rheumatism and Colds..	Continuous Dampness of Scouring Room.....	5.	None	Scour Room.
26	Know of None.....	Know of None.....	No Record.....	None	None so regarded.
27	Know of None.....	Inhaling Naptha Fumes.....	3.	1.	Japanning.
28	Know of None.....	Know of None.....	None	None	None so regarded.
29	Know of None.....	Know of None.....	None	Not Reported....	None so regarded.
30	Know of None.....	Know of None.....	Not Reported...	None	None so regarded.

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Liability to Accidents; Accident Producing Factors; Number of Fatal Accidents; Intemperance, Rare or Common; Precautions Against Diseases, Accidents, etc.

TABLE No. 3. REPORTS BY ESTABLISHMENTS.

Establishment Number.	BRANCH OF INDUSTRY IN WHICH LIABILITY TO ACCIDENT IS GREATEST.	PRINCIPAL ACCIDENT PRODUCING FACTOR IN THE INDUSTRY.	Total Number of Fatal Accidents During the Year 1905.	Intemperance Among Employees—	Improvements Introduced During Recent Years to Diminish Disease and Accident Liability.
1	In department where machinery is used..	Carelessness about machinery.....	1	Fairly common	No; factory constructed with all improvements.
2	Know of no special liability in any branch 'Tanyard'	Carelessness	None	Fairly temperate	Not reported.
3		Wet board, and careless use of machinery	None	Some branches common others rare	Every possible improvement has been made to guard against accident and insure cleanliness.
4	Splitting department	Carelessness in operating machines.	None	Rare	Everything required to make work safe.
5	Not reported	Careless handling of knives.....	None	Common	Conditions are improved each year.
6	Not reported	Not reported	None	Rare	No improvements made recently.
7	That in which the "staking machines" are used	Careless handling of machinery..	None	Rare	Blower system to carry off dust has been installed, beam-men's time reduced to 9 hours per day.
8	No special liability anywhere.....	Tacks and knives.....	None	Rare	None required—all precautions had been taken long ago.
9	No special liability anywhere.....	Know of none.....	None	Rare	Yes; everything necessary to preserve health is done.

10	Splitting department	Careless handling of splitting machine	1	Common	Yes; every visible danger is guarded against. Yes; all that seemed necessary. Yes; but the industry has few dangerous features.
11	Splitting department	Careless handling of splitting knives	None	Common	
12	Polishing department	Carelessness with knives and burnishers	None	Prevalent but not common....	Yes; liquor is excluded from the works.
13	The little that there is, is in the Machinery department	Carelessness in handling machinery	None	Rare	No; there appears to be no necessity.
14	Japanning department	Boiling of Japanning composition....	1	Rare	Yes; everything that appeared necessary
15	Machinery department	Careless handling of machinery....	None	Rare	No; there has been no apparent necessity.
16	Japanning department	Careless use of naphtha.....	None	Rare	No; factory was built with all necessary safeguards.
17	Japanning department	Careless use of naphtha.....	None	Rare	No; none appears to be necessary.
18	Machinery department	Carelessness in handling machinery	None	Rare	Yes; all that seemed to be necessary.
19	No particular liability in any branch.....	There is none.....	None	Rare	sary.
20	Machinery department	Carelessness in handling machinery	None	Rare	Yes; everything necessary for safety and health.
21	Machinery department	Splitting and softening machine....	None	Fairly temperate.....	Yes; have every known safeguard against accidents.
22	Machinery department	Carelessness about machinery.....	None	Prevalent but not common....	Yes.
23	Embossing department	Carelessness about machinery.....	None	Rare	Yes; every means of protection is resorted to.
24	Beam house and tannery	High speed machinery.....	None	Rare	Place is kept clean; rail guards around all machines and belts.
25	Machinery department	Work on splitting machine.....	None	Prevalent but not common....	No; none appear to be necessary.
26	No special liability in any branch.....	There is none.....	None	Rare	Yes; ventilators have been installed.
27	Japanning department	Mixing Japanning composition....	None	Prevalent but not common....	No.
28	Machinery department	Pulling out and glazing machines....	None	Rare	Not reported.
29	No particular liability in any branch.....	There is none.....	None	Prevalent but not common....	Yes; everything that has seemed necessary.
30	Machinery department	Carelessness in handling machinery	None	Rare	

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Character of Employment, Age at Present Time, Number of Years Engaged at Employment, Number Employed in Establishment, Number of Hours Worked per Week.

TABLE No. 4. REPORTS BY INDIVIDUAL WORKMEN.

Office Number.	BRANCH OF THE INDUSTRY IN WHICH EMPLOYED.	Age at Present Time. Years.	Time Employed at the Business. Years.	Average Number Employed in the Establishment During 1905.	Number of Hours Worked per Week under Normal Conditions.
1	Beam House	65	40	315	59
2	Beam House	56	32	300	60
3	Beam House	57	30	35	59
4	Beam House	50	30	260	60
5	Beam House	40	15	250	55
6	Beam House	40	18	23	55
7	Beam House	42	17	10	59
8	Beam House	50	16	250	55
9	Graining	64	45	125	54
10	Graining	68	40	12	55
11	Graining	50	30	160	59
12	Graining	55	32	50	59
13	Graining	54	30	14	60
14	Graining	41	20	200	60
15	Graining	45	25	288	54
16	Graining	41	17	50	59
17	Tanning	41	20	200	59
18	Tanning	32	10	40	60
19	Tacking	65	40	60	59
20	Tacking and softening	47	25	125	60
21	Splitting	40	20	220	55
22	Splitting	41	20	40	60
23	Japanning	50	28	70	60
24	Softening	47	20	150	60
25	Dye House	51	29	35	54
26	Glazing	52	30	75	50
27	Glazing	39	18	65	60
28	Scouring	40	20	150	60
29	Buffing	60	26	50	59
30	Buffing	50	25	12	60

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Branches Considered Unhealthful, Peculiar Diseases, Causes of Unhealthfulness, Number Absent on Account of Sickness, Character of Sickness.

TABLE No. 5. REPORTS BY INDIVIDUAL WORKMEN.

BRANCHES OF THE BUSINESS THAT ARE CONSIDERED UN-HEALTHY.	DISEASES SAID TO BE PECULIAR TO THE INDUSTRY.	PRINCIPAL CAUSES OF UN-HEALTHFULNESS.	Number of Employees Absent on Account of Sickness During the Year 1905.	CHARACTER OF THE SICKNESS OR DISEASE.	Number of Deaths from all Causes During the Year 1905.
1 None is so considered.... 2 Beam house..... 3 None is so considered.... 4 None is so considered.... 5 None is so considered.... 6 None is so considered.... 7 Beam house.....	There are none. Rheumatism..... There are none. There are none. There are none. There are none. A tendency to rheumatism and colds.....	None reported Continual dampness from vats. None reported None reported None reported None reported Wet floors and clothing.....	None. 10 1 4 None. None. 3	None reported Colds and rheumatism..... La Grippe..... Ordinary colds..... None reported None reported	2 3 1 1 1 None. None.
8 None is so considered.... 9 Beam house—if any..... 10 None is so considered.... 11 None is so considered.... 12 None is so considered.... 13 None is so considered.... 14 None is so considered.... 15 Beam house..... 16 None is so considered.... 17 None is so considered.... 18 None is so considered.... 19 None is so considered....	There are none. A tendency to rheumatism..... There are none. There are none. There are none. There are none. None reported A tendency to rheumatism..... None reported None reported None reported Liability to rheumatism and colds.....	None reported Wet floors and general dampness..... None reported None reported None reported Wet floors and continual dampness. Wet floors and general dampness..... None reported None reported Indigestion in the matter of drink. Dampness from vats.....	None. 2 None. 1 None. 11 12 6 7 4 1	Colds None reported Colds and rheumatism..... None reported An ordinary cold..... None reported Colds and rheumatism..... Colds and rheumatism..... Colds..... None reported None reported None. Not reported	1 None. None. None. None. 1 None. None. None. 1 None. None. 1 None.
20 Beam house..... 21 None is so considered.... 22 None is so considered....	Liability to rheumatism and colds..... None reported None reported	Dampness from vats..... Dampness from vats..... None reported	9 6 None.	Cold principally..... Colds; one case of pneumonia Not reported	2 4 None.

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Branches Considered Unhealthful, Peculiar Diseases, Causes of Unhealthfulness, Number Absent on Account of Sickness, Character of Sickness.

TABLE No. 5. REPORTS BY INDIVIDUAL WORKMEN.—Continued.

Office Number.	BRANCHES OF THE BUSINESS THAT ARE CONSIDERED UNHEALTHY.	DISEASES SAID TO BE PECULIAR TO THE INDUSTRY.	PRINCIPAL CAUSES OF UNHEALTHFULNESS.	Number of Employees Absent on Account of Sickness During the Year 1905.	CHARACTER OF THE SICKNESS OR DISEASE.	Number of Deaths from all Causes During the Year 1905.
22	None is so considered....	None reported....	None reported	3	Not reported	None.
23	None is so considered....	None reported....	None reported	4	Colds principally	4
25	None is so considered....	Liability to rheumatism and colds	None reported	5	Cold	None.
26	None is so considered....	None reported....	Dampness and wet floors.....	3	Not reported	None.
27	None is so considered....	None reported....	None reported	5	Not reported	None.
		Liability to rheumatism and colds	Indiscretion in the matter of drink.			
28	Beam house	None reported....	Dampness from wet floors.....	2	Not reported	2
29	None is so considered....	None reported....	None reported	None.	Not reported	None.
30	Beam house	Liability to rheumatism and colds	Dampness from wet floors.....	1	Colds principally	?

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Accidents—Branch Most Liable to, Principal Factors Producing Them, Principal Causes, Number of Accidents to Employes, Drinking Habits of Workmen, Factory Improvements to Guard Against Diseases and Accidents.

TABLE No 6. REPORTS BY INDIVIDUAL WORKMEN.

BRANCH OF INDUSTRY IN WHICH LIABILITY TO ACCIDENT IS GREATEST.		PRINCIPAL FACTORS IN THE PRODUCTION OF ACCIDENTS.		PRINCIPAL CAUSES OF ACCIDENTS.		Number of Employes that were Accidentally Injured During the Year 1905.		Intemperance Among Work- men. Common or Rare.		Factory Improvements Made During Recent Years to Lessen Liability to Acci- dent or Sickness.	
Office Number.											
1	Splitting	Splitting knives	Careless handling of knives	Careless handling of knives	None reported	3	Not reported	Neither	No: factory is fairly good. New flooring and improved drainage.		
2	Splitting	Splitting knives	Carelessness	Careless handling of machinery	1	None	Rare	Common	Nothing of importance.		
3	Splitting	Machinery	Careless handling of machinery	Careless handling of splitting knives	None reported	4	Men drink but are not intemperate.		Nothing of the kind done.		
4	Splitting	Machinery	Careless handling of machinery	Careless handling of splitting knives	None reported	None			Factory a new one—all improvements.		
5	Splitting	Machinery—splitting knives	Careless handling of machinery	Careless handling of machinery	2	None	Rare		None reported.		
6	Splitting	Machinery	Careless handling of machinery	Careless handling of machinery	None	None	Rare		None seems to be required.		
7	Splitting	Machinery	Careless handling of machinery	Careless handling of machinery	None	None	Rare		None reported.		
8	Splitting and glazing	Machinery	Careless handling of machinery	Careless handling of machinery	3	None	Rare		New floors in beam house.		
9	Splitting and glazing	Machinery	Carelessness of workmen	Carelessness of workmen	1	None	Rare		None reported.		
10	Splitting and glazing	Machinery	Careless handling of machinery	Careless handling of machinery	None	None	Not reported		None reported.		
11	Glazing	Machinery	Carelessness	Careless handling of splitting knives	2	None	Rare		None reported.		
12	Splitting and glazing	Machinery—splitting knives	Careless handling of machinery	Careless handling of splitting knives	None	None	Rare		None reported.		
13	Splitting	Machinery	Carelessness	Careless handling of splitting knives	None	None	Rare		None reported.		
14	Glazing	Machinery	Careless handling of machinery	Careless handling of splitting knives	4	None	Rare		None that are noticeable.		
15	Splitting	Splitting machines	Carelessness about machinery	Carelessness about machinery	None	None	Rare		None that are noticeable.		
16	Splitting	Splitting machines	Carelessness on the part of workmen	Carelessness on the part of workmen	2	None	Not reported		None that are noticeable.		
17	Glazing	Machinery	Careless handling of machinery	Careless handling of machinery	3	None	Common		New floors in beam house.		
18	Splitting and glazing	Machinery	Careless handling of machinery	Careless handling of machinery	None	None	Rare		Method for keeping their dry		
19	Splitting and glazing	Machinery	Careless handling of machinery	Careless handling of machinery	None	None	Rare		None that are noticeable.		
20	Splitting and glazing	Machinery	Careless handling of machinery	Careless handling of machinery	4	None	Rare		None that are noticeable.		

HEALTH AND ACCIDENT CONDITIONS OF THE LEATHER INDUSTRY, 1905.

Accidents—Branch Most Liable to, Principal Factors Producing Them, Principal Causes, Number of Accidents to Employees, Drinking Habits of Workmen, Factory Improvements to Guard Against Diseases and Accidents.

TABLE No. 6. REPORTS BY INDIVIDUAL WORKMEN—Continued.

Office Number.	BRANCH OF INDUSTRY IN WHICH LIABILITY TO ACCIDENT IS GREATEST.	PRINCIPAL FACTORS IN THE PRODUCTION OF ACCIDENTS.	PRINCIPAL CAUSES OF ACCIDENTS.	Number of Employees that were Accidentally Injured During the Year 1905.	Interference Among Work- men. Common or Rare.	Factory Improvements Made During Recent Years to Lessen Liability to Acci- dent or Sickness.
21	Splitting	Machinery	Carelessness on the part of workmen.	3	Rare	None reported.
22	Splitting	Machinery	Carelessness	None	Rare	None reported.
23	Splitting	Machinery	Carelessness	None	Rare	None reported.
24	Splitting	Machinery	Carelessness on the part of workmen.	3	Rare	None reported.
25	Glazing	Machinery	Carelessness	None	Rare	New floors in beam house.
26	Splitting	Machinery	Carelessness on the part of workmen.	2	Common	None reported.
27	Splitting and glazing...	Machinery	Carelessness	None	Rare	None reported.
28	Splitting and glazing...	Machinery	Carelessness	None	Not reported.	None reported.
29	Splitting and glazing...	Machinery	Carelessness	None	Not reported.	None reported.
30	Glazing	Machinery	Carelessness	None	Rare	None reported.

Apprenticeship Regulations of Trades Unions in New Jersey.

The almost absolute control which the greater number of unions at present exercise over the affairs of their respective trades is too generally well known to require any extended reference to the subject as a whole. Without going into the details of their policy, or advancing any opinion as to its wisdom regarding either the ultimate well being of the trades or the workmen employed in them, there is one aspect of the situation that perhaps outranks all the others in importance, to which, for several reasons, it seems advisable that some attention should be given, namely—the attitude of the unions toward the question of apprenticeships in their several crafts.

Almost from the beginning of the movement among the trades for organization in the late sixties the unions, in dealing with the question of apprenticeship, seem to have acted on the theory that the number of skilled workmen was already too abundant, and that reducing or limiting the supply would be the most direct means of enhancing the value of the labor of those who remained. The predominant idea seems to have been then, as it apparently is now, that the employer's right to train apprentices into journeymen should be so limited as to prevent overcrowding and the consequent lowering of wages; hence the rules of almost all unions of what may be called standard trades, that is, those in which indenture or apprenticeship for a certain number of years has been an established custom, contain provisions which in effect take from employers the power of determining the number of apprentices they shall have at any one time and vests the same in their own organizations.

The purpose in view met with a measurable degree of success, which increased with the extension of the power of the unions over their respective trades. Where this became absolute, as was the case in the wooden ship building industry in and about

New York for a few years preceding the panic of 1873, wages were forced upwards to an unprecedented extent. The least successful unions for the most part also did well in this respect, and mechanics' wages, particularly in the building trades, reached a level that has probably not since been exceeded.

The policy of restricting the number of apprentices was coincident with the growth of the power of the unions and the consequent establishment of high wages. Conditions were satisfactory and the only menace to their continuing so seemed to lie in a possible over-supply of labor which, it was reasoned, could be effectually guarded against by diminishing the opportunities for learning the trades. Accordingly, "apprenticeship regulation" became a fixed feature of the by-laws of substantially all organizations, and no rule in their codes for trade government was more rigidly enforced.

The panic of 1873, which brought business to an almost complete standstill, and from which recovery was very slow, reduced the industries of the country from a condition of activity and prosperity to one of stagnation and ruin scarcely equaled by any previous experience of like character.

But being concerned alone in the effects produced on the unions by this disaster, no attempt will be made to discuss the causes which brought it about, these being in a rather intensified form the same influences so well known and so difficult to analyze, that have caused business panics both before and after this one. It is sufficient to say that thousands of industrial establishments were closed entirely, and but few among the others were in a position to continue without reducing their working forces to one-half or even a smaller proportion of the ordinary number—the fortunate ones who still retained employment being content to accept, for the time being, in preference to hopeless idleness, the lowest wages known to their trades or occupations in years.

With the general collapse of industry, the unions either passed out of existence or ceased to be active. More than half the ordinary working population was idle and all would eagerly accept on any terms the work which was sought in vain. Standard wage rates were forgotten under the pressure of overwhelming necessity and apprenticeship regulations were useless where there was practically no demand for labor of any kind.

The processes of recovery were slow in bringing about results and almost a year passed before the centers of industry showed a noticeable reduction in the number of unemployed; but improvement had set in, and slowly but surely the wheels of industry were gathering a momentum which gradually approached normal speed. It was, however, some years—certainly as late as 1880—before business activity had expanded enough to absorb the multitudes of workmen who were suddenly thrown into idleness in 1873; but, although this was approximately accomplished after the lapse of seven or eight years, wages of labor and the prices of almost all kinds of commodities still continued to show the depressing effects of the panic.

The restoration of good times was marked by a resumption of activity in labor organization, under the influence of which a gradual advance in wages set in and some progress was made toward regaining the influence in trade matters which had temporarily passed from the unions after the financial crash. In fact, the foundations of the powerful existing system of trades organization were laid during that period as a direct outgrowth of the prevalent depression.

The Knights of Labor, the first really great national labor organization known to the country, was organized during the troubled times immediately following the panic; but, although a secret propaganda was vigorously pushed in all directions where the depression had left large numbers of people in idleness, it was not until several years later, or about 1880, that the order revealed itself as the synthetic force in industrial affairs which it afterwards became and continued to be, until practically superseded by the more radical organization—the American Federation of Labor.

In the plan of organization laid down by the Knights of Labor, trade lines were entirely disregarded—at least that was the policy pursued during the earlier years of its career; in the addresses of its organizers, its general literature and all other agencies employed in spreading the new gospel of reform, the idea was held and taught that all existing social and industrial inequalities which bear so heavily on the greater part of the population, were directly traceable to man's apparently inherent desire to overreach his fellow man, and that therefore the only

means by which these abuses could be successfully attacked, was to be found in a systematic and persevering policy of educating the people on ethical lines.

Men were to be taught to respect the natural rights of others and as the standards of social usefulness and success, moral and intellectual worth was to be given the eminence so long accorded to merely successful money making.

Local assemblies of the order established everywhere throughout the land were open to all; men and women were admitted on equal terms, the only qualification required for membership being good character, faith in the principles and purposes of the order, and a sincerely given pledge to strive by all legitimate and honorable means to secure for them a full measure of public recognition and approval.

The propaganda of the new movement was absolutely unselfish, and the membership was expected and required to work for the general welfare without reference to the prospects of direct benefits accruing to themselves. An air of altruistic self-effacement pervaded the entire scheme of organization, which was admirably expressed in its motto—"An injury to one, the concern of all."

A wonderful degree of success attended the efforts of the founders of this remarkable organization, at least in drawing numbers to its support. Within one year after its existence became generally known—for it worked in absolute secrecy for several years following its formation—the membership closely approximated one million. A very remarkable growth indeed was this when it is borne in mind that those who joined the movement did so without promise or expectation of personal benefits accruing from their work, but content to share as their reward the general prosperity which, it was believed, would surely follow the establishment of that spirit of justice and equity which they hoped to make the guiding principle in all the relation of mankind.

The movement was essentially generous and unselfish; the only parallel to the enthusiasm which it temporarily evoked being the anti-slavery agitation which preceded the Civil War. Like the abolition societies, the local assemblies of the Knights of Labor were composed of men and women of all classes and

occupations who regarded themselves as being engaged in a holy crusade for the elevation of humanity and looked upon their own mission as a logical continuation of the work of the anti-slavery men.

The first great uprising had aroused the conscience of the Nation to the iniquity of human slavery as a legalized institution and the second proposed to complete the work of labor emancipation by bringing about the abolition of the wage system, gradually substituting therefor the co-operative management of industry, under which a fair apportionment of the risks and profits of business enterprises would be made among all engaged in carrying them on.

The mystery with which the organization surrounded itself in the beginning, when its affairs were conducted in strict secrecy, prepared the way for its future growth; curiosity regarding it was stimulated to an unusual degree; those who had suffered through enforced idleness in the past felt encouraged to believe that membership in the order would surely guarantee them against the recurrence of such greivous experiences in the years to come, besides insuring them something more than scanty living wages in return for their labor. Conditions were therefore uncommonly favorable for rapid growth when at length the organization partly discarded the rule of secrecy hitherto strictly observed, and opened wide its doors to practically all who wished to enter.

The inrush that followed was something phenomenal in the history of labor organization; the number of local assemblies grew by hundreds every week and the membership by thousands. Eagerness to enjoy the protection of the "Noble Order," as it was officially styled, extended to all occupations, trades, and even to the professions, and for a brief time—so great was curiosity regarding them—any one of several of its general executive officers could depend on attracting as large an audience and being received with as much enthusiasm in any of the industrial centers of the Nation, as would be evoked by a visit from the most exalted and popular personage of the Government.

This, however, did not continue for long; the membership became discontented because of failure to achieve concrete results at once, and refused to be satisfied with the academic discussion of

abstract theories of industrial reform, from the establishment of which, material improvement seemed likely to be realized—if at all—only after long years of waiting. Higher wages and shorter hours of labor were the benefits most ardently desired; other wished for improvements might come later on, but as to these two, the demand was insistent, and soon became irresistible so far as the restraining power of the organization was concerned. A reluctant sanction was given to these demands, and soon there was an epidemic of strikes and lockouts, undertaken for the most part without official authority—if not in open defiance of it, although at the same time in nearly every instance, the fight once began, responsibility for its successful prosecution was forced on the general organization, and all concerned looked to it for support.

The pressure proved more than could be borne. The machinery of the order having been designed for leading in an entirely pacific evolution of industrial conditions, could not readily adjust itself to strife of this character, and so a practical collapse followed the unlooked for strain.

The principal source of trouble and confusion was in the grouping of membership in the locals, which, as before stated, was entirely without regard to the occupations followed by individuals. It thus happened that representatives of many different trades were members of the same local. Under these circumstances, a painter, for instance, having a grievance against his employer would lay the particulars before the members of his assembly, which body, following the customary course of procedure, would appoint an investigating committee with power to look into the matter complained of and bring about the best possible settlement in the interest of the complaining member.

If no fellow craftsman was to be found in the local, which was frequently the case, the painter's grievance had to be taken in hand by men of other callings who although well meaning and sympathetic to a degree, were still quite likely to be rather inefficient advocates of his interests, when contending with opponents trained in the business and thoroughly familiar with all the points in dispute. Under these circumstances it is not surprising that strikes, which were constantly multiplying in number, nearly all resulted disastrously; and that the workmen

concerned began to see clearly that the main cause of failure was to be found in the character of their organization which, for reasons before stated, afforded little or no opportunity for concentration of effort.

Soon, therefore, the idea of separate organizations for the different trades which had meanwhile taken root, resulted in the establishment of what were known as "trades locals," open only to those following the same trades or occupations; the "mixed locals" on the old plan, which ignored entirely the craft or calling followed by its members were still continued. In this way, the authorities of the order endeavored to meet and control the rising tide of trades unionism within its ranks, by adjusting its own machinery so far as possible to the new demand.

This step proved to be the disintegration of the order of the Knights of Labor, and the upgrowth of its rival, the American Federation of Labor. The first named organization had been supremely successful in creating a marvelously widespread interest in and desire for unionism, but being unable to satisfactorily adjust its machinery to the policy of aggressive action which the times demanded, its influence as a force in industrial affairs diminished, while that of its more radical competitor increased by leaps and bounds.

The old organization had effectively preached the gospel and sown the seed of industrial reform. For the first time since the great Chartist Movement in England, which arose out of the intense poverty of the masses following the utter and long continued prostration of business immediately after the close of the Napoleonic Wars, the demands of labor for better conditions were proclaimed with a mass and density of backing that commanded both attention and respect, but like its English prototype, the American organization, having thoroughly fulfilled its mission of "agitation and education," saw its membership dissolved into trade union groups in spite of every possible effort to hold them together.

From that time—about 1888—the American Federation of Labor has made rapid progress toward sole domination in the world of organized labor interests, and with its growth, academic discussion of abstract theories of industrial reform has largely given place in that domain, to vigorous action for the immediate achievement of concrete results.

These were not long in coming; hours of labor in practically all of the building trades were reduced first to fifty-four per week, then to forty-eight, and last—in many of them, to forty-four, each reduction of working time being accompanied by an increase in wages, which has brought earnings to as high, if not higher level, than was ever reached in the past, when sixty hours per week was the standard working time. With comparatively few exceptions, all local trades and labor unions are now affiliated with the American Federation of Labor, either directly or through the national bodies, which are a part of the organization system of almost all the trades. The minor bodies, however, reserve to themselves practical independence in most matters relating to purely local trade interests and make or unmake from time to time the rules and regulations governing work in their own localities.

The progress made by the various unions toward attaining complete control of their trades has, of course, not been uniform; some are struggling for recognition merely; others, who have attained that goal, are still engaged in making more or less strenuous efforts to reap some tangible advantages from their partial success; while a still further but smaller number have through one or another favoring circumstances carried everything before them and reduced employers in their lines of work to strict observance of union rules.

In this, the interlocking occupations known collectively as the building trades and also the unions of a few factory industries, such as "hatting" and "cigar making," have been most successful.

Having thus partly reviewed the circumstances that brought about the establishment of this great organization, which claims a present day membership of two million workmen, a body more numerous by reason of its numbers and its vigorous and aggressive policy than any other form of trades unionism hitherto known, that part of their programme which shows the understanding of justice and expediency held by the various trades in the important matter of apprenticeship regulations, will be pursued without further digression.

The abstracts which follow are taken from the by-laws of the unions, and show the apprenticeship rules in force at the time of their adoption.

BROTHERHOOD OF BOILER MAKERS AND IRON SHIP BUILDERS OF
AMERICA.

One apprentice is allowed to every five mechanics, such as a gang of "riveters," one "fitter up," two "soft patchers," and one "caulker." Firms employing such apprentices must do so under a written agreement which shall be satisfactory to the union. Apprentices under instruction are not allowed to leave their employers and go to others without the full and free consent of the former.

BRICKLAYERS' AND MASONS' UNION.

Local unions have an apprentice register in which the names of all apprentices within their several jurisdictions are entered, together with a record of their age, date and term of apprenticeship, and name of employer.

No employer may take on more than one apprentice at the same time; the first must have served one year before the second is engaged, and no employer is allowed to have more than two apprentices except the applicant be the son of a bricklayer or mason; but under no circumstances will more than three be allowed.

No apprentice is allowed to leave his first employer to work for another, except on proof to the local union that continuing with him would deprive the apprentice of a reasonable opportunity to learn the trade thoroughly.

Apprentices who are left without employment through the retirement from business of the firm for which they worked, are provided with other places by members of the union in which to serve out their terms.

Apprentices who have fully and faithfully served their terms are admitted into the union upon payment of one-half of the usual admission fee.

No person is eligible to apprenticeship under fifteen or over twenty-one years of age.

UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA.

Boys desiring to learn the carpenter trade are required to serve an apprenticeship covering three consecutive years. Employers to be entitled to an apprentice, must employ three journeymen steadily throughout the year, and for every additional apprentice, he must employ an average of three additional journeymen. Boys who have contracted with a boss carpenter to serve their terms of apprenticeship are not allowed under any circumstances to leave him and contract with another without his full and free consent thereto, unless there is good cause for making the change, such as the death or retirement from business of the first employer. Apprentices violating this rule will not be allowed to work in the jurisdiction of the union.

CIGAR MAKERS' INTERNATIONAL UNION OF AMERICA.

Apprentices to either cigar making or packing must serve three years, but not longer, without the consent of the local union. Proofs of service must be attested by officers of local unions under whose jurisdiction the apprentice shall have served the whole or part of his or her time. Apprentices are honorary members of the local union until their time is out; they are then full paying members.

Local unions have power to decide on the number of apprentices within their jurisdiction. The by-laws of some local unions provide that a manufacturer who violates the apprenticeship law may be punished by being deprived of the use of the "label" until he has deposited \$50.00 with the local union as security for future obedience.

Manufacturers who do not employ at least one journeyman for full time are not allowed to have an apprentice. At no time, nor under no circumstances, is a manufacturer allowed more than two apprentices.

The apprentice laws of local unions must be submitted to the general Executive Board for approval.

AMALGAMATED ASSOCIATION OF CLOTHING CUTTERS AND TRIMMERS.

Apprentices to this trade are required to serve three years, and only one is allowed in a shop for every ten journeymen or a majority fraction of that number. To be admitted as an apprentice application must be made in writing to the joint Executive Board, stating under what conditions and in what shop the applicant wishes to be employed, and the question of admission or rejection is decided by ballot, the same as in the cases of journeymen seeking admission to the union.

Only one apprentice may be taken on every three years, and should the number of employes in a shop be reduced, a proportionate reduction in the number of apprentices must be made, the juniors to be laid off first. Shops are not allowed to employ apprentices if the number of journeymen out of employment exceeds five per cent. of the total membership of the union.

Apprentices are required to become members of the union, paying the same initiation fees as journeymen, but are not permitted to vote at meetings.

GLASS BOTTLE BLOWERS OF THE UNITED STATES AND CANADA.

One apprentice is allowed to the first nine journeymen employed, and one for each fifteen additional journeymen. If the number of journeymen is reduced for any cause, the apprentices must be discharged in like proportion.

Firms starting their factories on or before March first may put on apprentices at any time during the blast. Firms starting later than March first are not allowed to take any apprentices.

If an apprentice leaves before the expiration of his term, the firm cannot employ another. If he should die before finishing his term, another may be taken on in his place. No one is regarded as an apprentice unless he is put in a place to blow.

UNITED HATTERS OF NORTH AMERICA.

Apprentices may be taken in shops only with the consent of the local union, and after their names are placed upon its register.

The terms for compensation are arranged between the union and the employer, but if an apprentice is placed on piece work he must receive the same price per piece as a journeyman.

The recognized period of apprenticeship is three years, served consecutively in a "fair" shop. No one is recognized as a journeyman until he has done this and has reached the age of twenty-one years. A boy must finish his apprenticeship with his first employer if possible, and he is not allowed to leave the district wherein he is registered unless the officers of the local association are satisfied that it is impossible for him to find employment therein.

When an apprentice has served his full time according to the dates on the union register, and not before, he may receive his traveling card from the national secretary through the local secretary of his district. He then has a right to go to work in shops in any other district where his services may be wanted, provided the officers of the local union of that district give their consent.

The rules provide that the time of the apprentice shall be divided while learning, as follows: three months with the instructor on the bench; nine months at sizeing; six months at blocking, and six months at stiffening. After this, the employer may place the apprentice at any branch of the business at which his services may be required.

IRON MOULDERS OF NORTH AMERICA.

Apprentices must serve four years and are in no case to leave their employers until the expiration of their terms.

One apprentice is allowed to each shop, irrespective of the number of moulders employed, and one to every eight moulders thereafter.

To become an apprentice, a boy must be not less than sixteen years of age, and must be indentured by written contract. The term of indenture must be completed with the first employer unless the apprentice is released by him.

Local unions make a record of the name and age of each boy apprenticed in the shop, with the date when his term of service began, and also the names of parents or guardians.

INTERNATIONAL ASSOCIATION OF MACHINISTS.

A boy engaging himself to learn the machinist trade must agree to serve four years, and is not allowed to leave his employer without just cause. The ratio of apprentices allowed is one to each shop, irrespective of the number of journeymen employed, and one to every five thereafter.

Boys are admitted as apprentices only between the ages of sixteen and twenty-five years of age.

Apprentices who have served two years at the trade are eligible to membership in the union, and are charged only one-half the regular initiation fees, dues, and assessments, in return for which they are entitled to one-half the usual allowance for sick, victimized, and strike benefits. They are entitled also to the journal of the trade, and their families or assignees, to the full death benefits allowed by the union.

NATIONAL UNION OF THE BROTHERHOOD OF PAINTERS, DECORATORS AND PAPERHANGERS OF AMERICA.

No regulations are laid down by the national union for the employment of apprentices beyond fixing the period to be served at three consecutive years.

The practice of indenturing learners is strongly recommended to the local unions as the best means of making efficient workmen at all branches of the trade.

The full period of apprenticeship must be served out with the first employer, whose free consent must be given before an apprentice can, previous to the expiration of his time, leave his service to work elsewhere at the trade, unless there be just cause for his doing so, or in the case of the death or relinquishment of business by the first employer.

An apprentice who disregards this rule will not be permitted to work under the jurisdiction of any local union of the brotherhood until he has returned to his employer and served out his full time.

Beyond fixing the number of years to be served by apprentices and obligating them to be faithful to the contract entered

into with the first employer, the national union does not interfere. The local unions are left to determine the proportion of apprentices to the number of journeymen employed in shops and otherwise regulating their relations to the trade. Boys in the last year of apprenticeship are admitted to the local unions as honorary members, exempt from dues for that year, but without the power to vote. This is done so that upon the expiration of their terms apprentices may be fully acquainted with the workings of the union, and therefore better fitted to appreciate its privileges upon assuming full membership.

PLUMBERS.

The local secretary who furnished this information reports that at the time the apprenticeship rules of his union were adopted, boys who were then engaged in learning the trade were to be retained and allowed to serve their time out.

Thereafter, no new apprentices shall be employed until those now in the shops have served their time out. The rule shall then be one to each shop. The apprentice shall serve four years as helper to the journeyman, and shall be instructed by him as far as possible in all matters pertaining to the trade, after which time he shall be permitted to use tools and work as a junior for the period of one year.

During this last year, he shall be paid the junior rate of wages, and at the end of the entire term, which is five years, he shall become a journeyman and receive the standard rate of wages.

To change from one shop to another, an apprentice must have the consent of his first employer, and also that of the local union of his district.

INTERNATIONAL PRINTING PRESSMEN'S UNION OF NORTH AMERICA.

Subordinate unions make rules limiting the number of apprentices to be employed in each office working under union rules. One apprentice is usually allowed for every four journeymen in places where Press Assistants and Feeders Unions exist.

Apprentices must be taken from the Assistants or the Feeders Unions, and are not admitted to learn the pressman's trade unless they hold certificates of membership in either one of these associations.

SAWSMITHS' UNION OF NORTH AMERICA.

The term of apprenticeship is four years, and a learner who leaves his employer before serving his full time must return and do so, unless excused by the union, under penalty of not being allowed to work in any union shop.

The ratio of apprentices established by the by-laws is one for the first ten journeymen or any fractional part of that number, and one for any number over one-half of every additional ten journeymen, besides one at large for each shop.

Boys are not permitted to begin learning the trade before arriving at the age of sixteen years, and will not be received after passing the eighteenth birthday. Apprentices are required to learn all branches of anvil work in the shops in which they are employed.

SLICK BUFFERS' AND WHITENERS' UNION.

The apprenticeship regulations of this union, which is a branch of the Amalgamated Leather Workers' Union of America, are very limited; being confined to a declaration that "no member of the union shall learn any person any part of the buffing trade without first receiving permission of the union, and such permission shall never be given while any member in good standing is out of work and willing to accept a job in the shop where an apprentice is wanted."

STEREOTYPERS' UNION.

All helpers in this trade are regarded as learners or apprentices and are permitted to become journeymen after having served five years; three of which, at least, must have passed before the apprentice arrived at the age of twenty-one years. Assistants

or apprentices are classed as journeymen and admitted to full membership in the stereotypers' union only after having passed an examination by the membership committee and secured a permanent job as a stereotyper. A helper or apprentice is not allowed to take a vacant position as a stereotyper while a journeyman member of the union is out of employment.

INTERNATIONAL STOVE MOUNTERS' AND PATTERNWORKERS'
UNION.

One apprentice is allowed for every ten journeymen or a majority fraction of that number. To be accepted as an apprentice, a boy must be not less than fifteen nor more than eighteen years of age, and the term of service is fixed at four years.

Apprentices must in all cases be engaged by proprietors of shops or their duly authorized representatives; and in no case is a member of the union allowed to employ an apprentice unless acting as foreman of the shop.

Apprentices must be placed on a floor by themselves and be under instruction by a day worker. Employers are required to have apprentices instructed in all branches of the trade and are not allowed to discharge them without just cause.

TYPOGRAPHICAL UNION.

The proportion of apprentices to regular journeymen allowed is one for ten or less, and for every five additional journeymen, one more apprentice. The International Typographical Union had fixed on four years as the minimum term of apprenticeship for the proper training of young men who desire to be skillful journeymen printers.

One local forbids its members to work in any office in which more than two apprentices each are employed in the job and book departments and one on newspaper. Apprentices are not allowed to change from composing room to press work; boys must be taught either one trade or the other and devote their time to that branch.

When a greater number of apprentices are employed in any of the specified departments, the chairman thereof shall call a chapel meeting to take action thereon, and report to the union; failure to do so constitutes a violation of the by-laws and subjects all members of the "chapel" to a fine. During the last year of his term, an apprentice may be admitted to what is designated as "apprenticeship membership" on payment of three dollars initiation fee, without, however, the privilege of voting.

Apprenticeship members are exempt from the payment of dues and assessments, and journeymen members are required to instruct them thoroughly in the principles and purposes of unionism. All persons working under instructions are regarded as apprentices.

WALL PAPER MACHINE PRINTERS' AND COLOR MIXERS' ASSOCIATION.

One apprentice is allowed to every seven machine printers employed in any one shop, and no apprentice can be employed unless there is a machine for him to run. The admission of an apprentice must be passed upon by the union and in no case can one be taken on without its sanction and approval.

Apprentices must not be more than twenty-one years of age at the time of commencement, and their entire terms must be served on the smallest machines in their respective shops. One apprentice is allowed in the color mixing department, to every five journeymen mixers, but a journeyman can in no case be discharged to make place for an apprentice. An apprentice is allowed to mix for only one printing machine, or for two ground machines.

Apprentices may join the union, but are required to pay an initiation fee of not less than twenty-five dollars.

WATCH CASE ENGRAVERS' INTERNATIONAL ASSOCIATION OF AMERICA.

Boys to be apprenticed to the watch case engravers trade must have the written consent of parents or guardian, and the term of apprenticeship is fixed at five years. The minimum at which

apprentices may be admitted is sixteen years; when the full term is served, the firm employing the apprentice may replace him with another.

Females are not admitted as apprentices.

Apprentices must be taught the entire trade—no sub-division of the same being allowed—and must serve out the full term of five years with their first employers.

WOOD, WIRE AND METAL LATHERS.

Apprentices must serve three years and be governed by the by-laws and shop rules of the union.

One apprentice only is allowed to each shop or contracting lather, and under no circumstances can an apprentice be employed without the consent of the union.

Apprentices are under the control of the union from their entrance into the trade, but are not required to pay dues or initiation fees until the expiration of the period of apprenticeship.

This concludes the record of apprenticeship regulations for which authoritative material in the by-laws of the unions could be obtained. The proportion having such rules is small when compared with the total number of trade and labor organizations, the reason being, obviously, that by far the greater number of them do not represent really skilled occupations in the broad sense of the term; in such lines of work the process by which the supply of labor is maintained being one of selection in the matter of intelligence and adaptability to the work in hand, rather than the long training through the medium of apprenticeship, by which proficiency in the standard trades is acquired.

Rules relating to apprenticeship are, as a general thing, made by the local unions; some of the national organizations make recommendations on the subject, such as the length of time learners should be required to serve and the age at which they should be received; these, however, the locals are at liberty to accept or reject as seems to them best, they being for the most part free to make or change such rules at will.

For this reason, strict uniformity in the regulation relating to apprenticeship must not be looked for among unions of the same

trade, but situated in different localities. Those given in the foregoing pages are strictly the law on the subject in the places from which they came, but may be found to differ in some more or less material respects from the rules enforced by the other locals of the same trade elsewhere.

The regulations quoted here show how firm is the grasp of the unions on all the affairs of their respective trades, and how completely the authority to select apprentices, which was once exercised by employers solely, has passed over to them. In almost every instance, a boy to be accepted as a learner, must secure the sanction of the union and have his name placed upon its register, before the employer into whose service he wishes to enter can merely consider the matter of starting him to work, even if the applicant were his own son.

That the unions recognize the responsibility they have assumed in this respect may be reasonably inferred from the strongly manifested interest which, through the medium of their rules, is shown in the apprentice's welfare; care is taken to insure his being thoroughly instructed in all branches of his trade, and also to see to his faithfully performing his duty to, and serving out his full time, if possible, with his first employer.

New Jersey as a Manufacturing State.

"In places wherein thriving manufactories have erected themselves, land has been observed to sell quicker and for more years purchase than in other places."—*Locke*.

The progress of modern civilization has brought about a radical change in the attributes and elements that once constituted the claims of peoples and States to the title of greatness. In the world-wide family of nations far greater prestige and importance now attaches to industrial force than to merely military prowess, and the workshop with its company of intelligent and contented craftsmen has superseded the intrenched camp as the representative and citadel of national power.

Merely dynastic or political aggrandizement is no longer regarded as a legitimate incentive to national aggression, even by the peoples least advanced in the march of progress, and war waged solely on such grounds would now evoke the universal condemnation of civilized mankind.

International and interracial rivalries are now perhaps more generally prevalent and cause keener contests than ever before in the world's history, but the incidental energy thus aroused, instead of finding its expression in devastating wars as in the olden times, is now directed toward the arts of peace, the triumphs of which glorifies the Creator in the moral and material elevation of his creatures.

The tournaments of olden times, at which nations represented by armed champions contended for the prize awarded for supremacy in the power to kill, has given way to the pacific rivalries of the modern industrial exposition, where national achievements in the domain of science, industry and art are compared, and the laurel crown awarded where most has been done for the preservation and elevation of human life.

The productive energy of nations, once calculated solely on the basis of mere numbers available for labor, unassisted except by

the crudest implements, has been multiplied to an inconceivable extent by the wonderful mechanical inventions of the present day, and the most powerful peoples are now those that have the greatest command over and capacity for making use of these prodigious agencies of production.

Adam Smith, in his treatise on the "Division of Labor," says: "The most opulent nations usually excel their neighbors in agriculture as well as in manufactures, but they are eminently more distinguished by their superiority in the latter than in the former."

Unquestionably the most advanced of all the nations of the earth in this respect at the present day is our own country. Mullhall, late the Chief Statistician of the British Royal Society, and the foremost authority of his day on matters pertaining to statistical science, in a study of the material resources of the American Union, which was published in 1897, says: "A survey of all the nations and peoples of ancient and modern times fails to reveal anything at all comparable to the growth and development of the United States"; further on in the same work the material resources of the leading nations are compared, the conclusion reached by the statistician being that as regards the various elements which he groups together under the designation of "physical energy," our republic is equal to England, France and the German Empire combined, and that our resources, if organized for that purpose, would be equal to maintaining a successful defensive war against the combined power of these three great nations.

The prosperity and wealth of the nation is the sum total of what has been achieved by the individual States, and the purpose in presenting the facts and figures that follow is to show that New Jersey has contributed her full quota to this great aggregation of wealth and power so impressively summed up by the eminent statistician.

The history of New Jersey as a manufacturing State in the modern sense begins practically with 1860, as indeed does that of the entire nation. The money expenditures of the Civil War, to meet the demands of the general government for the immense quantities of material and supplies of all kinds required for the creation and maintenance of its armaments on land and water, the necessary introduction of machinery on a large scale in al-

most every line of manufacture as the only means whereby these vast requirements could be met, the nationalization of the currency, which gave us instead of the paper of local banks a form of money that was secured by the credit of the entire nation, and of equal value in all parts of the country, were the factors that brought about a triumphant termination of the four years of war, and laid the foundation for the immense industrial expansion which we as a nation have since achieved.

The extent to which New Jersey has participated in this growth, and the steps by which her industrial development has attained its present imperial proportions will be shown further on, but first it seems not improper to briefly review the industrial conditions of New Jersey at a much earlier date as presented in a semi-official volume called the "New Jersey Register," which was published in 1837.

In the part of this publication devoted to manufacturing industry detailed accounts are given of the products of the factories of *Newark*, *Paterson* and *Trenton*, which seem to have been at that time the only cities in which there was much manufacturing activity of any kind. The "Register's" presentation is as follows:

NEWARK.

"Newark is principally distinguished for its manufactures, which are unsurpassed for number, variety and beauty of workmanship by any city of similar extent and population in the world.

"The following statistical table, which has been carefully compiled, will exhibit a general review of the business of the city, the greater portion of which consists of its own manufactured articles. The table is believed to be essentially correct:

Boot and shoe manufacture	\$1,523,000
Hat manufacture	1,055,000
Carriages of every description and railroad cars.....	1,002,000
Saddles, harness, whips, etc.	885,500
Clothing—manufactured for the southern market.....	840,000
Tanning and currying. The principal portion of this business is done in the swamp in Market street.....	899,200
Coach axles, springs, door locks, brass mountings, etc.....	260,000
Coach lace, tassels, fringe, etc.	80,000
Oil silk, patent leather, malleable iron, every variety of casting used by coach makers, machinists, etc. The collection consists of more than 1,000 plain and ornamental patterns now in use	225,000

Cabinet manufacture	\$180,000
Jewelry	225,000
Trunk and chair manufacture	90,000
Silver plating	100,000
Sash and blind	70,000
Coal trade. This business has been extensive the past year.....	200,000
All other manufactures, comprising many different branches, may be fairly estimated at	500,000
Total	\$8,124,700

"Among the manufacturers named in the last general clause may be mentioned the manufacture of gas pipes and steam engines of all kinds, glass cutting, including tumblers, astral shades, decanters, etc. Heinich's establishment of splendid cutlery, surgical instruments, tailors' shears and scissors; Vartkolp's Britannia ware, Hunter's manufactory of table and bowie knives, knives and forks, etc.; plane making, coach and buggy railings, stoves, hooks and eyes; Grant & Wilcox's manufactory of marble mantels, plated harness, statuary, stock and dies; screw presses and lathes, and mechanics' tools in general; looking glasses, shoe and saddle knives; patent and ivory black—of the latter article from 80 to 100 tons are yearly manufactured; bel-lows manufacture of every variety; pumps, castings, etc. There is also a large manufactory of lime which employs several ves-sels; the siftings of Lehigh coal are used in burning it.

"The number of mechanics engaged in each of the different trades in Newark was found in September last (1836) to be as follows:

Carpenters	433
Masons	174
Painters	130
Stone cutters	27
Carriage makers	339
Saddle and harness makers	527
Blacksmiths	294
Shoemakers	543
Hatters	245
Tailors	206
Curriers	136
Cabinet makers	126
Platers	62
Coach trimmers	87
Lace weavers	51
Trunk makers	35
Fancy chair makers	27
Brass founders	11
Locksmiths	18

Soap and candle makers	13
Saddle tree makers	26
Tinware workers	37
Cap makers	13
Patent leather makers	19
Printers	19
Moulders	40
Coopers	15
Coach and spring makers	13
Sash makers	23
Carvers	5
Jewelers	27
Tanners	14
Total	3,734

The total number of merchants engaged in business in the city of Newark in 1836 is reported at 97.

The rank and importance of the city as a port of entry is indicated by a report of its commerce for the twelve months ending December 31st, 1836, which showed the total value of goods imported in foreign and American vessels to have been only \$59,-806.75, and the value of dutiable goods of all kinds imported in American and foreign vessels, \$18,602.

Inhabitants of Newark owned vessels engaged in the Pacific whale fisheries that aggregate 700 tons, and the hospital money received during the year from vessels sailing to and from the city amounted to \$245.35.

The list of goods exported presents a curious and interesting contrast to the schedules of the present day. These were as given in the "Register," straw, flour, tobacco, sugar, spermaceti candles, pimento, mahogany, cocoa, etc.

The chief articles imported were salt, coal, railroad iron, fish, hides, plaster and lumber.

Some very interesting details relating to the population of Newark appear in a census made in 1836 under direction of the City Council. The city was divided into four wards, named after the cardinal points of the compass—North ward, South ward, East ward and West ward.

The total population was 19,732, of which number 720 were free colored people and 10 were slaves.

The number of brick or stone dwellings in the city was 144, and the number of frame dwellings, 1,814. There were 124 stores, 46 of brick and 78 of wood, and 218 workshops, 18 of brick and 200 of wood.

PATERSON.

The introductory note to the "Register's" account of manufactures in Paterson recites some of the leading facts and incidents of the city's growth with which the generality of people of this generation are well acquainted. It is pointed out that "The growth and prosperity of the place is entirely owing to the valuable water power which it possesses, and which attracted the attention of capitalists so early as 1791," and further, that the Society for the Encouragement of Useful Manufactures was organized that year under the leadership of Alexander Hamilton.

The power was obtained by diverting the waters of the Passaic River from their natural channel just above the falls, and conducting them by means of a permanent and tastefully constructed raceway along three separate levels to many ranges of mills, and finally discharging them again into the river. By this arrangement the water was used three times over in its descent from the upper to the lower level of the river.

The first factory or mill to make use of the water power was completed in 1794. From that period to 1814 the growth of the place was slow, but in that year Roswell L. Colt, who became Governor of the society, inaugurated a most vigorous policy which within a comparatively short time lined the head races with mills of a widely diversified character.

The "Register" gives the following: "Statistical view of the manufacturing establishments, millwright, machine shops, etc., in Paterson in 1832":

"One saw mill, with two saws; one grist mill, with two runs of stones; four turning and bobbin factories, employing 43 hands; two bleaching establishments, employing 18 hands; four millwright establishments, employing 59 hands; one manufactory of cotton wadding, where wadding of a superior quality is manufactured; four machine factories, employing 404 hands.

"There are 19 manufactories of cotton; in these are 40,500 spindles in operation; they employ 1,646 hands, and use annually 3,360,272 pounds of raw cotton."

Other manufactories in operation at this time were—one flax mill, having 1,616 spindles, consuming 493,000 lbs. of flax per year, and employing 196 hands. The product was duck and bagging and the title of the operating corporation, the Phoenix Mfg. Co.

A cotton mill owned by John Colt, in which, in 1832, 460,000 yards of cotton duck were manufactured.

A satinett factory, with a dye house, having 1,322 spindles, 23 power looms and 13 hand looms. This factory employed 75 hands and consumed annually 105,000 lbs. of wool.

The total number of power and hand looms in operation in 1832 was 374; total number of spindles, 43,439; total cotton, wool and flax annually consumed was 3,958,272 lbs.; total number of persons employed in all establishments was 2,543. The "Register" is responsible for the statement that "a large proportion of the hands employed in these factories are children."

A button factory employing 28 persons, in which steel buttons, clasps, buckles and other ornaments of steel and iron were made, and a gilt button manufactory, employing 20 persons, and producing about 9,000 gross of buttons a year. The average price of these buttons was \$4.50 per gross, or a little more than three cents each. A note appended to the account of this factory states that "The buttons made in this establishment as it respects perfection of workmanship and elegance of finish, in the opinion of competent judges, are not surpassed by any gilt buttons imported from Europe."

A four-story brick factory building owned by Rogers, Ketchum & Grosvenor, as stated in the note, not only afforded working accommodations for the machinists employed by the firm, but "was also capable of containing 5,900 cotton spindles with the machines for preparation."

Mention is made of several new stone and brick factory buildings in course of erection on the raceway, which were to be used severally for a millwright, cotton mill and the production of paper.

For a building site fronting on the race 100 feet, and in depth varying according to location, with the privilege of one foot square of inlet for water, an annual rent of \$500 was charged.

The water was usually drawn under a head two feet below the average river level.

The industrial standing of Paterson in 1832 and its prospects of future expansion were summed up in these terms:

"The location of Paterson is well adapted to its pursuits. The Morris Canal brings to its citizens such of the products of the valley of the Delaware as they need; the various agricultural supplies afforded by the extensive country through which it passes; the mineral wealth of the Sussex and Morris mines, while it opens a water communication—that great desideratum to a manufacturing place—with the city of New York. On the other hand, the Paterson and Hudson river railroad presents a rival conveyance and doubtless a successful one for travel and light goods to the same city. The place is healthy and contains a population of about 10,000."

TRENTON.

The account given of manufacturing prospects present and future in the Capital city of the State, as they appeared in 1832, is not over enthusiastic, to say the least. In fact, there is a distinct tinge of pessimism running through the brief narrative of things achieved and possible of achievement, and no glimpse is anywhere afforded of the triumphant industrial career which the city has since enjoyed. The statement which, as in the case of Newark and Paterson, is drawn from the New Jersey Register of 1837, is as follows:

"It is only recently that this city has become entitled to the name of a manufacturing place. Possessing advantages unsurpassed by any location in the Union for enterprise of this character, its merits were long overlooked by strangers and forgotten by its inhabitants. It was not until the year 1816 that the valuable and almost natural power of the Assanpink was fully employed. About that time two cotton mills were erected upon its waters, which for nearly 14 years contained within their walls the entire manufacturing spirit of Trenton. In 1830 the rapid progress in business, improvement and wealth, which almost every village, town and city on the Atlantic seaboard

seemed to be making, aroused the slumbering energies of the place. The first step taken by its leading citizens was a united and vigorous advocacy of the Delaware and Raritan canal project. Authority to make that improvement obtained, attention was turned to employing the waters of the Delaware for manufacturing purposes. To this end a company, almost exclusively composed of citizens of Trenton, was incorporated in February, 1831, with a capital of \$60,000, which was subsequently increased to \$90,000, to construct a raceway or canal from any point below the head of Wells' Falls on the Delaware, through Trenton, to the village of Lambertton (Lambertville.)"

"Under this charter the Trenton Delaware Falls Co. has completed a main raceway or canal from Scudder's Falls, in the Delaware, through Trenton to their own plot, nearly midway between Bloomsbury and Lambertton. This race is about six miles in length, is sixty feet wide at the water line, and six feet deep. At the Assanpink the available head and fall is fourteen feet, and upon the company's and the adjoining sites it is eighteen feet and a half. The whole power now available is equal to that of five hundred and twenty-nine horses.

"But this is not the extent of the company's resources. The banks of the raceway along the whole line have been constructed with a view to holding eight feet of water. A slight extension of the wing-dam at the head of the work, as contemplated by the charter, would give this additional head of two feet, and would make the top water line in the raceway sixty-six feet.

"This would greatly increase the velocity of the current, and would give a column of water per minute of 52,704 cubic feet, equal to 1,170 horse power, if used as originally intended—one-third at the Assanpink and two-thirds upon the lower sites. The entire cost of this work, when ascertained, will not vary much from \$170,000."

The "Register's" description of the newly established water power quoted above is supplemented by a "Table showing the milling operations and prospects of Trenton" in 1836. From this it appears that nine mills were in actual operation, turning out goods; four were in course of building; one built, but waiting for the completion of the branch race to furnish power, and

five that were "to be built in the spring." So much of the table as relates to the "mills in operation" is reproduced below:

BUSINESS.	Capital Invested.	Sq. ins. of water used under 3-ft. head.	Product for One Year.
Cotton mill.....	\$180,000	Not measured....	500,000 yards of goods.
Cotton mill.....	75,000	250	300,000 yards of goods.
Grist mill.....	40,000	150	60,000 bushels of grain ground.
Grist mill.....	40,000	150	60,000 bushels of grain ground.
Lumber mill.....	20,000	167	1,500,000 ft. of lumber sawed.
Lumber mill.....	7,000	75	500,000 ft. of lumber sawed.
Paper mill.....	14,000	Not measured....	3,000 reams of paper.
Wood turning.....	6,000	23	32,000 wagon bows, etc.
Oil	20,000	117	24,000 gallons of linseed oil.

The mills, building and projected, were for the purpose of carrying on the business of manufacturing paper, calico, machinery, trunks and buttons.

In summing up the status of Trenton as a location for manufacturing industry, mention is made in the Register of the following advantages: "An almost inexhaustible water power," and the "most ready access to the best markets." The means of "ready access" are thus particularized: "A railroad leading to Philadelphia on the one hand, another soon to connect it with New York on the other, and a third in prospect to extend through the valley of the Delaware to meet the Susquehanna road; a water communication with the east by the "most spacious canal in the Union," and "with the south by the Delaware River."

The city is referred to as being situated in a region "abounding both in quantity and variety with agricultural products," and also as having a surplus of banking capital, and "a salubrious atmosphere," all of which it is claimed "presents to manufacturers of every class the most ample inducements."

The further interesting statement is made that the population of the city and adjoining villages, "which for a manufacturing place may emphatically be called American, is almost 7,000."

Other places referred to as of potential importance from the industrial point of view are: New Brunswick—"a fine water

power equal to 400 horses, derived from the Raritan River, with a head and fall of fourteen feet."

Belvidere—"A fine water power derived from the Delaware River, as yet almost totally unused, but sure to become valuable when the contemplated railroad connecting the village with the Capital of the State is completed."

Lambertville—"A fine water power derived from the feeder of the Delaware and Raritan Canal. Water communication to Philadelphia direct, and to New York by way of the canal. A grist mill was expected to be erected in the spring."

Pemberton—"A valuable water power derived from the north branch of the Rancocas Creek. There is already upon it a grist mill with five run of stone, a saw mill with two saws, a wood turning mill and a woolen factory. Mention is made of there being a surplus power here sufficient for the employment of a large capital."

Roxbury, in Morris county—"A fine water power, derived from the Morris Canal. In the township there are seven saw mills, four flour mills, two fulling mills for domestic cloth, a woolen mill, a clover mill, a turning mill, a circular saw mill and two cording mills," and last on the rather meagre list of places in which industry has obtained a firm footing in New Jersey in these early years of our history, is the township of Greenwich, in Warren county. There, we are told, were to be found "seven merchant and eight country mills, four oil mills, six saw mills and one woolen mill, all of which are propelled by water power, and in the aggregate employ forty or fifty hands, all of which are males. The manufactures are sent partly to New York and to Philadelphia.

"The entire value of the articles which they are able to produce, if fully occupied during the entire year, may be estimated at nearly one million of dollars."

This brief narrative conveys a fair understanding of industrial conditions in New Jersey at the time to which it refers. Only a few localities are included, but among them are places that were then, as they are now, among the chief industrial centers of the State. There is, however, enough in its contents to show that the seeds of industrial enterprise, which were destined to have such a magnificent growth during succeeding years,

had taken root even at that remote period in our history. The basis of industrial activity everywhere and the chief element in determining the choice of locations in which to establish manufacturing ventures was the availability of water power, and the places in which this was found most abundant and reliable experienced the greatest amount of growth.

In the meagre list of goods made, drawn from the accounts relating to Newark, Paterson and Trenton, there is only an occasional glimpse of the great and important lines of manufacture for which New Jersey has since become famous and in which she leads all other States at the present time.

In Newark we find the manufacture of men's hats well established, as was also the making of carriages and other vehicles, leather tanning and dressing, harness and harness hardware and jewelry; these lines of trade, all in greatly expanded form, still occupy leading places in the list of widely diversified industries now carried on in that city.

In Paterson no mention was made of either of the two industries, the manufacture of silk goods and the building of locomotives, for both of which the city is now so famous, although, as a matter of fact, the people of New Jersey in common with those of many other States were about this period (1836) extensively moved by the craze for silk culture, which took the form of planting mulberry trees and hatching silk worms. In 1836, following the example of other States, New Jersey, by an act of the Legislature, offered a bounty of sixteen cents a pound for cocoons and fifty cents a pound for reeled silk. Besides this important encouragement extended to silk culturists, premiums were offered for the same purpose by counties, agricultural fairs and stock companies, of which there were many, engaged in selling mulberry trees.

Such attempts as were made to manufacture silk fabrics at this time, and several small ventures of that character were tried in Massachusetts, Connecticut and New York, appear to have been not so much for building up the industry as for stimulating interest in the trade in mulberry trees.

The first silk mill in Paterson was started in 1840 by Christopher Colt, a brother of Samuel Colt, the inventor of the revolving pistol, but it was not a success, and was closed after

being operated about four months. The same mill was reopened by John Ryle, who, in 1846, succeeded for the first time in producing broad goods.

The report of the United States Census of 1840 on the manufacture of silk goods gives the total value for the entire country at \$119,814.00; number employed—males, females and children, 767; capital invested, \$274,374.00. Connecticut ranked first, producing \$55,485.00; Massachusetts second, \$38,079.00; Pennsylvania third, \$14,644.00, and New Jersey fourth, producing \$850.00, and employing ten males and seven females and children upon an invested capital of \$2,020.00.

He would have been a bold prophet indeed to have foretold in those days the great expansion which this industry was destined to enjoy, and that the city of Paterson, the "Lyons of America," would, within the limits of one lifetime, become the greatest center of the silk industry in the western world.

The same may be said of Trenton, and the production of pottery ware for which it is now famous, not only in our own country but throughout the world. Not a vestige of it existed in the town at the time under review, and the sole representatives of the great clay product works that now form so large a part of the industries of Mercer and Middlesex counties were a small stone-ware factory at Old Bridge, started in 1800, said to have been the second establishment in the United States for the production of pottery ware, and one small brick plant at or near South Amboy.

The manufacture of pottery was begun at Jersey City in 1829, but it was not until 1852 that the first establishment was opened in Trenton, by one James Taylor, a thrower from the Jersey City plant. This pottery was supplied with one kiln, six feet in diameter, and from this very modest nucleus has grown the trade that has made Trenton famous as the great center of the American pottery industry.

The first fairly comprehensive account of industrial conditions in New Jersey is obtained from the United States Census of 1850; it appears that at that time the amount of capital invested in all forms of industry was \$22,293,258; the number of wage earners employed, 37,830; the amount paid in wages, \$19,364,740, and the total value of the year's product of goods of all kinds

was \$39,851,256. These figures, small as they appear in comparison with the totals of more recent census years, were, no doubt, swelled by the inclusion of many kinds of business that would not now be classed among manufacturing industries.

In 1860, which was, as before stated, the real starting point of industrial growth under the stimulus of labor-saving machinery, the capital invested in manufactories of all kinds in New Jersey was \$40,521,048, an increase as compared with 1850, of \$18,227,790, or 81.8 per cent.; the number of wage earners employed was 56,027, an increase of 18,197, or 48.1 per cent.; the amount paid in wages was \$16,277,337, an increase of \$6,912,597, or 74.0 per cent.; the total value of the annual product was \$76,306,104, an increase of \$36,454,848, or 91.5 per cent. The average annual earnings of labor were \$247.18 in 1850, and \$290.52 in 1860, an increase during the ten years of \$43.34, or 17.6 per cent.

The large increases in "capital invested," "amount paid in wages," and "value of annual product," with the relatively small increase in the number of "wage earners employed," are all strikingly indicative of the progress made in the introduction of improved machinery during the decade preceding 1860.

To bring these results about the first requisite was, manifestly, to largely increase the capital invested in order that better machinery might be employed and manufacturing process improved. That this was done is shown by the fact that the average amount of capital invested per employee, which was \$589.56 in 1850, has grown to \$723.24 in 1860. The facilities for more rapid work thus provided in the form of improved machinery in 1860, represented advantages of various kinds equal to 22.7 per cent., which the workmen of that period enjoyed over those of 1850. The results of this change should be clearly observable both in the earnings of labor and the value of product per employee, and in each of these respects the improvement has been both marked and uniform. The value of product per employee was \$1,053.43 in 1850, and in 1860 it was \$1,361.60, an increase of \$308.17, or 29.2 per cent.; average annual earnings of labor, as already pointed out, showed an increase for the same period amounting to \$43.34, or 17.6 per cent.

A fairly comprehensive view of the range of industries existing in New Jersey in 1860, and the scale on which they were

carried on, may be obtained from the following table, compiled from the census reports of that year:

INDUSTRY.	Number of Establishments.	Capital Invested.	Average Yearly Earnings per Employee.	Average Yearly Earnings per Employee.	Total Value of Annual Products.
Agricultural implements	33	\$202,850	260	\$286 57	\$310,460
Boots and shoes.....	375	580,369	2,813	270 87	1,850,140
Brick	42	248,350	611	163 53	337,300
Calico printing	4	791,000	714	299 69	850,000
Carpetings	40	133,790	387	156 63	475,445
Carriages	218	991,075	2,244	358 43	2,264,530
Cigars	53	152,750	286	300 70	434,868
Clay mining	5	89,500	88	358 58	105,660
Clothing (men's)	153	1,611,165	7,258	525 90	4,042,002
Cooperage	39	92,750	239	345 15	213,832
Cotton goods	5	420,000	1,246	184 63	902,000
Cotton yarn	17	739,000	932	320 86	943,494
Edge tools	17	109,000	220	441 02	257,925
Fire brick	10	197,600	173	343 70	186,800
Fisheries (oysters)	160	186,875	564	281 00	394,470
Flour and meal.....	397	2,719,185	747	296 78	6,947,515
Glass ware and window.....	16	768,266	1,694	295 78	1,098,000
Hardware (coach and saddlery)....	39	341,100	970	324 28	809,950
Hats and hat bodies.....	61	833,250	2,861	341 07	4,363,328
Hosiery	7	477,200	1,491	150 00	783,456
Rubber goods	5	870,000	817	211 93	1,303,000
Iron (bar, sheet and railroad).....	26	1,098,100	963	333 30	1,617,519
Iron castings (general).....	58	1,651,050	1,421	355 04	2,198,531
Iron castings (stove).....	3	29,000	44	411 81	71,887
Iron castings (malleable).....	7	213,000	331	341 40	333,500
Iron ore	20	359,000	636	355 12	481,750
Iron pig	6	932,000	517	323 53	1,016,630
Jewelry	32	967,500	944	482 11	1,660,944
Leather (morocco and patent).....	96	1,743,900	1,323	355 95	3,520,108
Locomotives	4	711,592	1,295	410 27	1,565,000
Liquors (distilled)	56	311,200	171	305 33	604,587
Liquors (malt)	32	1,116,500	277	357 01	1,425,425
Lumber (sawed)	259	1,156,900	581	319 30	1,608,610
Machinery (steam engines, etc.).....	55	1,213,000	1,709	384 89	2,098,997
Oil cloth (enameled).....	8	400,200	362	389 47	1,029,150
Oil cloth (floor).....	11	311,000	280	304 84	554,200
Paper (printing and wrapping).....	36	990,000	715	271 24	1,502,783
Paper hangings	7	180,000	223	226 00	390,600
Pottery ware	24	149,200	361	278 76	253,480
Saddlery and harness.....	118	1,340,300	1,375	378 35	1,717,737
Ship and boat building.....	30	271,300	362	459 45	420,118
Silk (sewing twist, etc.).....	6	203,000	689	152 57	950,900
Tin, copper and sheet-iron ware...	84	316,750	429	333 65	655,290
Trunk, bags and valises.....	14	349,500	822	289 71	1,053,800
Varnish	11	155,200	24	539 50	347,000
Woolens	35	583,400	835	243 26	1,085,104

The industries enumerated above were the principal ones in operation in New Jersey in 1860. By far the most important among them in regard to value of annual product was the milling of grain into flour and meal; 397 establishments were engaged in this trade, and their joint product was, as shown on the

table, valued at nearly \$7,000,000. That these mills were small, however, is shown by the fact that the total number of persons engaged in the industry, owners included, averaged a small fraction less than two to each of them. It is interesting to know that notwithstanding the great decline of agricultural interest in the eastern part of the country which followed the general opening of the West after the completion of the first of the Pacific railroads, the flour and grist mill industry has more than held its own; the mills are much larger but not so numerous as in the early days; the value of annual products is nearly 22.0 per cent. less in 1906 than it was in 1860, but flour and meal are now fully 25.0 per cent. lower in prices than they were at that time. The number of persons employed and the capital invested in the industry are substantially the same for both periods.

The manufacture of men's clothing and men's soft fur and felt hats had reached a remarkably high state of development in 1860. In the last named line of goods New Jersey was ahead of all other States, and the value of our product was equal to nearly one-third of the entire country.

Our product of writing paper, wrapping paper and straw board combined was, in 1860, greater than that of any other State. The principal mills were located at Trenton, Newark and Paterson. One of the Paterson mills, the "Ivanhoe," was regarded as the most completely equipped plant for paper making purposes to be found at that time in the entire country. The industry had an early beginning in New Jersey, the records showing that in 1801 letters patent were granted to a resident of Newark, for making paper from *curriers' shavings*; and again, in 1802, to a citizen of Burlington, covering a process for making paper from *corn husks*.

Wall paper was made on a very small scale in New Jersey as early as 1787.

The manufacture of cooking stoves, ranges and hot air furnaces had not reached a very advanced stage of development in 1860, as the aggregate value of the product of these goods during that year amounted to only \$153,000.

A highly interesting product of New Jersey industry in these early years was the manufacture of malleable iron, which com-

bines the ductility of wrought-iron with the cheapness of the ordinary gray iron casting. This class of iron was first made in Newark about 1828. In 1831, a citizen of that city secured two patents on processes for making it. In 1860 there were 26 establishments in the country engaged in the production of malleable iron; the total value of the entire product was \$930,000, of which something more than one-third was produced in New Jersey foundries, seven in number. Six of these foundries were located in Newark.

In 1860, there were fifty establishments engaged in the production of machinery and millwright work; they were, however, almost without exception, small even for those times. The largest number of these shops were located in the cities of Newark, Jersey City and Paterson. Among the factories classed as machine shops was one devoted entirely to the production of machinists' small tools, of which it produced annually a quantity equal in value of \$2,800.

The total number of locomotives built in the United States in 1860 was 470, and the number of establishments engaged in the business was 19. The capital invested in the business was \$482,592, and the value of the engines produced was \$4,869,900.

More than a third part of this product came from four shops in New Jersey, which turned out 166 locomotives, valued at \$1,565,000, of which sum \$765,000 was credited to one establishment in Paterson, which employed 720 workmen, and built 90 locomotives during the year 1860. Paterson had three locomotive building plants, and the only other shop of that character in the State was one at Burlington, owned by the Camden & Amboy Railroad Co., in which a few engines and cars were built for its own use.

Fire-arms were manufactured in one establishment in New Jersey, and the value of its product in 1860 was \$60,000.

The silk industry in New Jersey consisted in 1860 of two mills engaged in the production of fringes and trimmings, and six others whose product was limited to sewing silk, or "twist." These eight establishments were located in Paterson.

The population of the State in 1860 was 672,075, and the proportion engaged in manufacturing industry of every kind was

8.3 per cent. The number of manufacturing establishments in existence was reported to have been 4,173, and the average amount of capital invested per establishment was \$9,173.

Essex led all other counties in the number of manufacturing industries, and goods valued at \$27,927,514, or nearly 37 per cent. of the total for the entire State, were made in her 770 establishments. Next in importance came Hudson and Passaic, with products valued at \$6,760,241 and \$6,288,842 respectively. Mercer came next with products valued at \$4,750,020, and the other counties showed values of goods ranging in amounts from \$91,803 for Atlantic to \$3,882,842 for Union.

The number of distinct articles of manufacture reported for the entire State by the census of 1860 was 251, and the figures representing the value of products show that only 21 of these reported an annual output of \$1,000,000 or over. The average value of annual product per establishment was \$18,286, and per industry \$304,008. Of the 56,027 wage earners employed, 12,829, or 22.9 per cent., were females, and 77.1 per cent. males. The average yearly earnings of wage workers for all industries in 1860 was \$290.52.

These particulars have been gone into for the purpose of indicating the principal lines of manufacture existing in the State in 1860, and also the scale on which they were carried on. The low averages of capital invested, value of product per establishment and annual earnings serve to illustrate the limited aid which industry received from improved machinery in these early years. As already noted, there was much progress in this respect during the ten years which ended in 1860, but the figures representing these elements, particularly the average earnings of labor, were, although much higher than in 1850, still very low. The progress made between 1860 and 1870 bears out the statement already made, that the industrial growth of the State on modern lines began in the early part of this decade—with the outbreak of the Civil War. The figures for 1870, and also those for each census period thereafter, show a large and increasing ratio of gain in old established industries and the beginning of many new ones that have since grown to large proportions.

The wonderful story of the growth and development of an industrial commonwealth is clearly shown by the figures in the

following table, relating to capital invested, number of wage earners employed, amount paid in wages and value of the annual product of goods for each census year from 1850 to 1905:

Year.	Capital In-vested.	Number of Wage Earners Employed.	Amount Paid in Wages.	Total Value of Year's Product.
1850	\$22,293,258	37,830	\$9,364,740	\$39,851,256
1860	40,521,048	56,027	16,277,337	76,306,104
1870	79,606,719	75,552	32,648,409	169,237,732
1880	106,226,593	126,038	46,083,045	254,380,236
1890	250,805,745	173,778	82,944,118	354,573,571
1900	502,824,082	241,582	110,088,605	611,748,933
1905	715,060,174	266,336	128,168,801	774,369,026

The full significance of the tremendous growth illustrated by the above figures is hard to grasp, but some understanding of its magnitude may be attained by reflecting on the fact that in 1850 the capital invested in manufacturing industry throughout the entire nation was only \$533,245,351, which was \$181,814,823, or 25.4 per cent., less than the amount invested in our State alone in 1905; and that our factories produced goods during the year 1905 which were equal to 76 per cent. of the total value of all the manufactures of the United States in 1850.

From 1850 to 1905, a period of fifty-five years, or less than the span of one life, the capital invested in all forms of industry in New Jersey has increased from, using round figures, \$22,000,000 to \$715,000,000; the number of wage earners employed, from 38,000 to 266,000; the amount annually paid in wages from \$9,000,000 to \$128,000,000, and the value of the annual product of manufactured goods from \$40,000,000 to \$774,000,000.

In 1860 there were five States, the value of whose annual production of manufactured goods surpassed that of New Jersey; these were in the order named: New York, Pennsylvania, Massachusetts, Ohio and Connecticut. With the exception of Connecticut, whose lead was very slight, amounting to less than \$6,000,000, the other States named above showed product values ranging from 100 to 500 per cent. greater than ours. In 1905 New Jersey is still in the sixth position with regard to the total

value of annual products; the States in the lead are still the same, with the single exception of Connecticut, which has lost its rank to the great Middle Western State of Illinois. But there is now a very much narrower margin between the annual value of our products and those of our leading competitors; all have experienced an immense development during the past forty years, but none in measure that equals that with which we have been favored.

In 1870 the population of New Jersey was 906,096, and the proportion engaged in manufacturing industry remained precisely the same—8.3 per cent.—as it was in 1860. The number of establishments engaged in productive industry was 6,636, counting all the hand trades which, by the way, are not now included in the statistics of manufactures. The average amount of capital invested per employee was \$1,053.67, as against only \$723.24 in 1860, an increase of \$330.43, or 45.7 per cent. The average value of annual product per employee was \$1,361.60 in 1860, and \$2,240.00 in 1870; an increase in favor of the latter year amounting to \$878.40, or 64.5 per cent.

The average annual earnings or wages of labor, all classes—skilled and unskilled, males and females included, was \$290.52 in 1860; in 1870 the average was \$432.11, an increase of \$141.59, or 48.7 per cent.

The increases in the value of products and of annual earnings, as here shown, are certainly very large; but in so far as the value of products is concerned, allowance should be made for the enhancement of prices through the depreciation of the currency, which followed for some years after the close of the war. That a considerable proportion of the gain was due to this cause, as well as to actual increase in the quantity of goods produced during the year, there can be no doubt. The remarkable increase in average earnings of labor was to a large extent due to the same cause, that is to say, an abnormal increase in prices followed by a corresponding reduction in the purchasing power of money, which was compensated by a large increase of wages. But if the percentage of increase in value of products and average annual earnings of labor were reduced fifty per cent. to allow for this inflation in values due to transitory causes, there would still remain an increase, due to the natural growth of industry, of 32.2 per cent. in the average value of annual pro-

ducts per employee, and 24.3 per cent. increase in the average annual earnings of labor.

The total value of products for the entire State was, as shown in the table, \$76,306,105 in 1860; in 1870 it was \$169,237,732; the increase according to these figures reached the sum of \$93,931,628, or 123.0 per cent. But as was said in connection with the averages presented above, and for the same reason, the figures representing this increase should be reduced fifty per cent., leaving the gain in manufacturing production during the ten years to be represented by \$46,965,814, or 61.5 per cent.

The list of goods produced in New Jersey, as reported by the United States Census of 1870, contains 258 distinct articles, principal among which, in the matter of annual value of finished goods, were "flour and grist mill products," \$12,593,148; almost double the value reported in 1860, but the increase was, no doubt, largely due to the advance in the selling value of these goods which had been going on for some years back. "Sugar refining," which this year (1870) makes its appearance in the list of New Jersey industries for the first time, reports products valued at \$11,200,000.

Other industries showing a prosperous condition through the medium of largely increased product values were: "Men's felt and fur hats," \$5,007,300; "forged and rolled iron," \$5,208,000; "printing calico and woolen goods," \$5,006,000; and "silk goods," including "sewing twist," \$4,527,664.

Highly significant of the great future in store for the silk industry in New Jersey are the figures relating to it for 1870, as compared with those of ten years before. In 1860 there were only six establishments with 689 employes engaged in the businesses, and the value of products, which was almost entirely composed of sewing twist, braid and fringe, amounted to only \$950,900. In 1870, there were 30 establishments, employing 2,840 persons, which was even then the largest number of wage earners employed in any one factory industry in the State, and the product of goods which was about equally divided between sewing twist and broad and ribbon goods, amounted to \$4,527,664. The number of mills increased in these ten years 400 per cent.; the number of persons employed, 312 per cent.; and the value of annual products, 373 per cent.

Other industries showing product values largely increased over those of 1860, were the manufacture of "boots and shoes," \$3,639,076; "Men's clothing," \$3,269,325; "malt liquors," \$3,219,482; "jewelry," \$3,315,679; "trunks, valises and satchels," \$3,793,000; and machinery, steam engines, etc., \$2,740,919.

An epoch making industry of the very first magnitude makes its first appearance in the records of New Jersey manufactures this year; we refer to "Sewing machines," in the production of which there was reported in 1870 one establishment, employing five persons, and producing machines of the total value of \$4,500, on an invested capital of \$5,000.

This modest beginning of a great industry is worthy of note in view of the fact that at the present day New Jersey leads the world in the production of sewing machines. One establishment alone, located in Elizabeth, the largest of its kind in the world, gives employment to more than 7,000 wage earners, and produces approximately 750,000 sewing machines per year.

The values of annual products of manufactured goods by counties, in 1870, were as follows:

Atlantic	\$799,464	Hudson	\$24,256,017
Bergen	5,325,072	Hunterdon	4,754,686
Burlington	4,884,498	Morris	4,644,951
Mercer	8,881,074	Ocean	717,197
Middlesex	5,372,580	Passaic	19,953,728
Monmouth	2,605,176	Salem	2,277,791
Camden	8,320,912	Somerset	2,551,109
Cape May	218,640	Sussex	1,455,104
Cumberland	6,314,577	Union	5,986,512
Essex	52,168,968	Warren	5,996,965
Gloucester	1,798,168		

Of the 258 articles which comprise the list of New Jersey manufactures in 1870, forty-four showed values ranging from one million to twelve million dollars.

As a matter of course, every county in the State showed large advances in the value of products, but by far the greatest strides were made in the three middle counties of Hudson, which gained 259 per cent.; Passaic, 217 per cent., and Essex, 87 per cent. The total value of goods produced in these counties in 1870 was \$96,333,703, or only a small fraction less than 57 per cent. of the product of the entire State.

In 1880 New Jersey was credited with 7,128 establishments, great and small, engaged in manufacturing industry. The

capital invested in these was \$106,226,593, an increase over 1870 of \$26,619,874, or 33.4 per cent. The total number of wage earners employed was 126,038, an increase of 50,486, or 66.8 per cent. The total amount paid in wages was \$46,083,045, an increase of \$13,334,536, or 40.8 per cent. The total value of products of all kinds was \$254,573,571, an increase over 1870 of \$85,335,839, or 50.4 per cent. Classified as men at least 16 years old; women at least 15 years old; and children—that is to say, boys under 16 years, and girls under 15 years of age—the average number of wage earners was, in 1880, divided as follows: Males, 86,787, or 68.9 per cent.; females, 27,099, or 21.5 per cent., and children of the ages specified above, 12,152, or 9.6 per cent.

The average annual earnings for all three classes of employes was \$365.63. These figures as compared with those of 1870 show an actual falling off in annual earnings of \$66.48, or 15.4 per cent. This marked decline in wages can be accounted for to a very large extent, if not entirely, by the increase in the purchasing power of money which followed the resumption of specie payments, and the sweeping reductions of wages in practically all labor employing industries that followed the panic of 1873. But notwithstanding these adverse influences, the average earnings of labor were still \$75.11, or 25.8 per cent. higher in 1880 than they were at the commencement of the new industrial era in 1860.

In 1880 the population of our State was 1,131,116, and the proportion of that number engaged in manufacturing industry was 11.2 per cent., which was an increase of 2.9 per cent. as compared with 1870 and 1860. The average capital invested per employee was \$842.82, and the average value of annual products per employee was \$2,018.28, a falling off in the per capita amount of capital, and a very large increase in the per capita value of products per employee, as compared with the figures of 1870.

In 1890 the capital invested in manufacturing industry, as reported by the United States Census, was \$250,805,745, an increase over that of 1880 of \$144,579,152, or 136 per cent. The number of wage earners was 173,778, an increase of 47,740, or 37.9 per cent. The amount paid in wages was \$82,944,118, an

increase of \$36,861,073, or 80.0 per cent., and the value of annual products of finished goods was \$354,573,571, an increase over the values for 1870 of \$100,193,335, or 39.3 per cent.

The average annual earnings of wage workers was \$477.30 in 1890; as compared with the earnings of 1880 these figures show an increase in the annual per capita compensation of labor amounting to \$111.67, or 33.1 per cent. The average amount of capital invested per employee was \$1,442.25, an increase of \$600.25, or 72.4 per cent. over the average for 1880. The average value of annual product per employee was \$2,040.38 in 1890, as against \$2,018.28 in 1880, a gain of only \$22.10, or a small fraction more than one per cent.

Of the 173,778 wage earners employed in 1890, 131,370, or 75.6 per cent., were classed as men 16 years of age and over; 37,095, or 21.3 per cent., as women 15 years of age and over, and 5,313, or 3.1 per cent., as children—boys and girls who were respectively under 16 and 15 years of age.

The population of New Jersey in 1890 was 1,444,933, and the proportion of the same engaged in manufacturing industry was 12.0 per cent. In 1880 the proportion was 11.2 per cent.

An analysis of the composition of the working force with regard to sex and age shows that the male employes had increased from 68.9 per cent. in 1880 to 75.3 per cent. in 1890; the female employes were practically the same at both periods, being 21.5 per cent. in 1880 and 21.4 per cent. in 1890, but the proportion of children employed at both periods, 9.6 per cent. in 1880 and 3.1 per cent. in 1890, shows a most radical and gratifying change in the matter of child labor, and is at once a justification of the system of factory legislation begun in 1883, and a tribute to the fidelity and vigor with which these laws were enforced. The proportion of male employes had increased 6.4 per cent., while that of females and children had diminished 0.1 per cent. and 6.7 per cent. respectively. Factory construction and management were greatly improved as a result of these laws, and under their salutary influence many features of factory life that were formerly a menace to the health of operatives have been greatly modified or permanently removed.

Of the one hundred and ninety-nine general industries reported in 1890, sixty-five were credited with an annual product exceed-

ing in value \$1,000,000. Of these the principal ones, with the number of persons employed and value of annual products, were as follows:

INDUSTRY.	Number of Establishments.	Number of Wage Earners.	Total Value of Annual Products
Clay products (pottery, brick., etc.).....	155	9,094	\$7,991,611
Cotton goods	17	5,653	5,902,615
Dyeing and finishing textiles.....	41	3,735	6,183,397
Foundry and machine shop products.....	249	12,798	21,666,955
Glass (window and bottle).....	34	5,688	5,218,152
Hats and caps (not including wool hats).....	87	6,527	8,533,729
Iron and steel (forgings, architectural, etc.)..	54	5,278	10,301,892
Jewelry	74	1,757	4,724,500
Leather (tanned and finished).....	74	3,368	11,592,728
Liquors (malt)	34	1,174	10,018,393
Petroleum refining	4	2,011	20,711,330
Sewing machines	3	3,448	4,177,330
Silk goods (broad and ribbon).....	132	17,445	30,760,371
Woolen and worsted goods.....	27	4,930	7,710,829

In 1890 more than 36 per cent. of the value of clay and pottery products for the entire country came from New Jersey, and 13 per cent. of all the glass; 23 per cent. of all the hats and caps; 13 per cent. of all the jewelry; 84 per cent. of all the petroleum refining; 33 per cent. of all the sewing machines, and 35 per cent. of all the silk goods also came from the factories and workshops of our State.

The rank held by New Jersey among the other States in the important lines of manufacture named above is as follows: In "clay and pottery products," "hats and caps," "patent and enameled leather," "sewing machines" and silk goods we were number one; in the production of "glass, window and bottle," and "refining petroleum," number two; in the manufacture of "jewelry," number three; in "foundry and machine shop products," and in the production of "malt liquors," we were number six.

In New Jersey, as elsewhere throughout the Union, the growth of all forms of productive industry was seriously checked by the panic which began to manifest itself in the latter part of 1892, and continued, although with diminishing intensity, until 1897. Manufacturing activity in New Jersey for each of these years averaged fully 33 per cent. below the normal, and the shrinkage was as great in other States, but when the revival began, the building up movement went ahead with much greater rapidity in New Jersey than elsewhere, and the figures relating to manufacturing industry in this State for 1900 show not only the greatest increases in its history, but also far surpass the growth enjoyed by any other State during the same period, as will be explained further on.

In 1900 the capital invested in manufacturing industry was \$502,820,082, an increase of \$252,018,337, or a little over 100 per cent., as compared with 1890. The average number of wage earners employed was 241,336, an increase, as compared with 1890, of 67,804, or 39.0 per cent: The average amount paid in wages was \$110,088,605, an increase of \$27,144,487, or 32.7 per cent. The total value of annual products was \$611,748,933, an increase, as compared with 1890, of \$257,175,362, or 72.5 per cent. During the same period the annual value of manufactured goods increased 38.6 per cent. in Illinois; 38.0 per cent. in Pennsylvania; 29.7 per cent. in Ohio; 27.1 per cent. in New York, and 16.5 per cent. in Massachusetts.

The average amount of capital invested per employee was \$2,081.30, as against \$1,442.25 in 1890, an increase in 1900 of \$639.05, or 44.3 per cent. The average annual earnings of labor were \$455.71, as against \$477.30 in 1890, which shows a decrease in 1900 of \$21.59, or 4.5 per cent.

The average value of product per employee was \$2,531.80 in 1900; compared with the figures for 1890, \$2,040.38, there has been a gain in this respect of \$491.42, or 24.8 per cent.

The population of our State in 1900 was 1,883,669, and the number engaged in manufacturing industry, 241,582, was 12.8 per cent. of the total, an increase over the proportion so engaged in 1890 of 1.6 per cent.

Of the 241,583 wage earners employed during the year 1900, 181,879, or 75.3 per cent., were males 16 years of age and over;

51,661, or 21.4 per cent., were females 16 years of age and over, and 8,042, or 3.3 per cent., were children of both sexes under 16 years of age. Compared with the classification of 1890, the proportion of male employes shows a falling off of 0.3 per cent., while that of females and children show increases of one-tenth of one per cent., and two-tenths of one per cent. respectively. Considering the fact that the classification of 1900 placed all females below the age of 16 years in the children's column for the first time, a much greater proportion of child labor than that indicated by the percentage given above might have been reasonably expected.

The extent to which New Jersey's percentage of increase in the value of manufactured goods exceeded that of the other principal industrial States, as shown above, is alike gratifying to our pride and suggestive of the rapidity with which we are, under the influence of many favoring circumstances, moving to a much higher position in the list of manufacturing States than even the one we have hitherto enjoyed.

The latest figures available for the purposes of this necessarily brief review of the growth of our manufacturing industries, are those relating to the year 1905, which are drawn from the census of manufactures made by the United States government that year, and also from the records of this Bureau for the same time, the results of both counts being substantially alike. The principal figures are as follows: Capital invested, \$715,060,174, an increase in five years of \$212,236,092, or 42.2 per cent. Average number of wage earners employed 266,336, an increase of 24,754, or 10.2 per cent. Amount paid in wages, \$128,168,801, an increase of \$18,080,196, or 16.4 per cent. Value of manufactured products, \$774,369,025, an increase of \$162,620,092, or 26.6 per cent.

Classified as men, women and children, the total average number of wage earners quoted above was divided as follows, in 1905:

Males, 16 years old and over, 195,447, or 73.4 per cent.; females, 16 years old and over, 62,887, or 23.6 per cent.; and children of both sexes under 16 years of age, 8,002, or 3.0 per cent. The average annual earnings for all classes of wage earners was \$481.23, an increase of 5.6 per cent. over the earnings of 1900.

A partial list of the great and prosperous industries that have arisen for the most part since 1870, and for which our State is now famous, is as follows:

INDUSTRY.	Capital Invested.	Number of Wage Earners.	Selling Value of Annual Products.
Chemicals and chemical products.....	\$28,153,686	6,546	\$24,177,517
Cigars and tobacco.....	15,230,558	7,223	19,426,820
Drawn wire and wire cloth.....	3,131,368	1,526	18,635,920
Electrical appliances	15,706,172	5,462	12,017,000
Food products	6,509,000	2,388	17,244,840
Foundry products	14,000,000	8,200	17,135,220
Glass (window and bottle).....	4,244,150	7,694	4,830,472
Hats (soft fur).....	3,465,140	5,563	9,742,723
Iron and steel.....	51,694,677	9,108	23,667,483
Jewelry	6,712,774	3,091	9,733,063
Leather	11,375,000	5,616	20,968,000
Malt liquors	29,700,000	1,964	15,811,000
Machinery	35,826,900	12,154	31,847,150
Metal novelties	9,890,298	6,550	12,150,000
Oil refining	34,365,982	3,683	46,608,984
Rubber products	13,263,000	5,761	20,210,024
Scientific instruments	4,500,000	3,485	8,000,000
Silk and silk goods.....	33,644,698	25,481	42,862,247
Smelting and refining copper.....	7,892,904	1,243	62,795,613
Smelting and refining precious metals.....	12,190,000	3,598	30,111,000
Structural steel and iron.....	27,643,940	7,000	14,084,127
Woolen and worsted goods.....	18,270,220	8,531	19,103,425

This list might be extended by the addition of several industries of sufficient magnitude to be entitled to representation; among these may be mentioned the smelting and refining of lead, the refining of sugar and molasses, and the manufacture of sewing machines. but for the reason that only one or two establishments—in each case the largest of their character in the country—are engaged in these industries, the data relating to them are withheld in order to avoid the possibility of disclosing the operations of the individual firms concerned.

Of the textile industry, the figures relating to the production of silk and silk goods, and woolen and worsted goods only, are

given separately on the table. In addition to these, there are many large establishments engaged in the manufacture of carpets and rugs, cotton goods of many varieties, with dyeing and finishing plants for treating the same; hosiery and knit goods, linen goods, jute and cordage, twine and thread. The industry is, in fact, the most important one in the State, in respect to "capital invested," which in 1905 aggregated \$90,893,100 for all branches. At the same time the number of wages earners employed was 57,890, and the value of annual products reached the enormous total of \$96,060,407.

During the five years between 1900 and 1905, the capital invested in the general textile industry had increased \$9,919,169, or 12.2 per cent.; the number of wage earners, 4,800, or 9.1 per cent.; the amount paid in wages, \$3,103,858, or 15.5 per cent.; and the value of products, \$14,149,557, or 17.3 per cent.

By far the most important of the industries included in the textile group is the manufacture of silk and silk goods, to which is credited 37.0 per cent. of all the capital invested.; 49.2 per cent. of the wage earners, and 44.2 per cent. of the value of annual products for the entire industry.

In 1890, 1900 and 1905, our State held first rank in the United States in the production of broad silk fabrics and ribbons, producing as we did, 35.3 per cent. of the total quantity of the former and 45.9 per cent. of the latter.

A very interesting circumstance relating to the history of the silk industry, and one the mention of which is timely in view of the Jamestown Exposition to celebrate the settlement of the first English speaking colonists, which is now open, is that its beginning within what are now the territorial limits of the United States was made at Jamestown, when King James I, of England, lent his loyal favor by bestowing on the London Company, who were the proprietors of the colony, "plenty of silk worms, seed of his own store, being the best." The seed was sent out to Jamestown by the company as one of the means of helping the early colonists.

We have thus briefly sketched the growth of manufacturing industry in New Jersey, endeavoring to show with as much detail as possible under the restriction of limited space, the successive advances by decades which have carried us in fifty-five years from a condition of obscurity in the industrial sense up to

a high position in the front rank of manufacturing States. How immense the expansion has been can perhaps be better realized, or at least a realization of it will be assisted by contemplating side by side the figures relating to both periods—that is to say, for 1850 and for 1905, which are here presented:

Capital invested	{ 1850..... \$22,293,258
	{ 1905..... 715,060,174
Number of wage earners.....	{ 1850..... 37,830
	{ 1905..... 266,336
Amount paid in wages.....	{ 1850..... \$9,364,740
	{ 1905..... 128,168,801
Total value of year's product....	{ 1850..... \$39,851,256
	{ 1905..... 774,369,025

Another very striking illustration of the extent of manufacturing expansion in our State may be drawn from a comparison of the power required for the operation of all forms of productive industry in 1870—the earliest period for which there are reliable data, with that in use in 1905.

In 1870 there were 984 steam engines, and 1,132 waterwheels of various types in use, all of which developed an aggregate of 58,139 horse power. In 1905 the number of power motors of all kinds used in productive industry was 8,754, of which 3,474 were steam engines; 203 gas or gasoline engines; 155 water wheels; 8 water motors; 4,895 electric motors, and 19 compressed air motors. These several varieties of engines and motors were required to furnish an aggregate of 443,000 horse power in order to keep the wheels of industry moving, as against the 58,139 which was sufficient for all industrial demands only thirty-five years ago.

As before stated, New Jersey ranks sixth among the States in the value of her annual product of manufactured goods. New York, Pennsylvania, Illinois, Massachusetts and Ohio, the latter by a small margin, in the order in which they are named.

The per capita value of annual product of manufactured goods in New Jersey was, in 1905, \$361.24, and the amount of capital invested per capita was \$333.57. In both these respects we are ahead of all other States with the single exception of Rhode Island, which is far in the lead by reason of her limited territorial area and comparatively dense population.

In the proportion of population employed in manufacturing industry, New Jersey with its 12.4 per cent. ranks next after Rhode Island with 20.2 per cent., and Massachusetts with 15.5 per cent.

The extent to which the various municipalities having a population of 8,000 or over contributed to the sum total of the State's manufacturing industry is shown in the following table. The figures relate to year 1905.

Summary Showing Amount of Capital Invested, Number of Wage Earners Employed, Amount paid in Wages, and Value of Annual Products in Municipalities Having a Population of 8,000 and Over, for 1905.

MUNICIPALITY.	Capital Invested.	Average Number of Wage Earners.	Amount paid in Wages.	Value of Annual Products.
Atlantic City	\$1,919,268	381	\$233,004	\$974,835
Bayonne	50,296,704	7,057	4,276,613	60,633,761
Bloomfield	4,177,405	1,893	1,024,309	4,645,483
Bridgeton	2,147,450	2,276	1,014,116	2,963,840
Camden	31,992,497	12,661	6,097,913	33,587,273
East Orange	3,047,905	854	453,700	2,326,552
Elizabeth	23,564,094	12,335	7,397,978	29,300,801
Hackensack	2,933,203	812	277,776	1,488,353
Harrison	11,388,823	4,040	1,928,999	8,408,924
Hoboken	11,776,602	7,227	3,572,667	14,677,305
Jersey City	82,394,841	20,353	10,021,067	75,740,934
Kearney	2,924,564	1,303	505,132	4,427,904
Long Branch	2,038,354	294	155,241	577,268
Millville	3,809,692	2,767	1,527,902	3,719,417
Montclair	565,629	151	72,116	621,145
Morristown	781,637	307	170,899	704,412
Newark	119,026,172	50,697	25,621,626	150,055,227
New Brunswick	10,392,709	4,590	1,792,230	8,916,983
Orange	3,441,183	2,450	1,312,002	6,150,635
Passaic	28,611,310	11,000	3,866,098	22,782,725
Paterson	53,695,585	28,509	13,001,545	54,673,083
Perth Amboy	11,583,382	3,950	1,827,055	34,800,402
Phillipsburg	6,723,185	3,148	1,472,182	6,684,173
Plainfield	5,101,343	1,986	1,025,716	3,572,134
Trenton	41,623,232	14,252	7,000,731	32,719,945
Union	7,294,574	1,856	875,126	3,512,451
West Hoboken	6,017,875	3,562	1,276,369	5,947,267

The comparative rank of these municipalities in the matter of capital invested, number of wage earners employed, amount paid in wages, and value of annual products is as shown in the subjoined table:

MUNICIPALITY.	RANK IN			
	Capital Invested.	Number of Wage Earners.	Amount paid in Wages.	Value of Annual Products.
Atlantic City	25	24	24	24
Bayonne	4	9	7	3
Bloomfield	17	19	18	16
Bridgeton	23	17	19	21
Camden	6	5	6	6
East Orange	20	22	22	22
Elizabeth	8	6	4	8
Hackensack	21	23	23	23
Harrison	11	11	10	12
Hoboken	9	8	9	10
Jersey City	2	3	3	2
Kearney	22	21	21	17
Long Branch	24	26	26	27
Millville	18	15	13	18
Montclair	27	27	27	26
Morristown	26	25	25	25
Newark	1	1	1	1
New Brunswick	12	10	11	11
Orange	13	16	15	14
Passaic	7	7	8	9
Paterson	3	2	2	4
Perth Amboy	10	12	12	5
Phillipsburg	14	14	14	13
Plainfield	16	18	17	19
Trenton	5	4	5	7
Union	13	20	20	20
West Hoboken	15	13	16	15

Great as has been the industrial progress of New Jersey in the past, all existing circumstances point with certainty to an even greater expansion in the near future. Our unused opportunities and natural advantages for carrying on manufacturing industry advantageously are greater by far than can be found elsewhere. In the east the sheltered shore line which extends from the Atlantic Highlands along the deep waters of lower and

upper New York Bay, Staten Island Sound and Hudson River, to the extreme northern limit of the State, with deep water frontage for the entire distance of fifty or more miles, offers ideal locations, with shipping facilities by rail or water, that are not surpassed—if they are equalled—anywhere else in the world. Attracted by these advantages, many of the largest plants in the country engaged in the oil refining industry, the refining of gold, silver, copper and lead ores, and the manufacture of chemicals of every variety known to trade, are settled along this shore. Great machine shops, ship yards, steel works and architectural terra cotta plants are also there, and the number of these great industrial hives is steadily increasing.

On the western side of the State substantially the same advantages of cheap land in practically limitless quantities, with first-class rail and deep water facilities for freight transportation, are to be found along the New Jersey side of the Delaware River from Cape May to the head of navigation at Trenton.

The unsurpassable railroad service—steam and electric—which extends to practically all parts of the State; the natural advantages of geographical position between the two great States of New York and Pennsylvania, with the Hudson and the Delaware rivers on the east and the west; the protection and encouragement extended to both capital and labor by impartial and equitable laws; the widespread intelligence of the people guaranteed by an excellent and liberally supported system of public instruction; immunity from labor disturbances of a serious character, and numberless other advantages, natural and social, which New Jersey offers to the industrialist and the home seeker, must lead inevitably to a full realization of the most exalted hopes entertained by her patriotic sons for her future industrial greatness.

Economic Changes in the Building Trades of Essex County. 1896-1906.

During the ten years which intervened between 1896 and 1906, the cost of almost every commodity required for family, personal and business purposes has been slowly but steadily advancing.

That the incomes, earnings or wages of the majority must have maintained somewhere near the same ratio of increase is self evident, for there is no more immutable rule of business than that market prices for both necessities and luxuries must adjust themselves to the general purchasing power of the largest number of people. If it were otherwise in the case of any particular article its use would diminish to such a degree as to make its production unprofitable.

While the majority of persons have been able to preserve the balance between income and necessary outgo with a fair degree of closeness, there is unquestionably a very considerable number of less fortunate ones who must suffer more or less because their means do not advance with the advancing cost of living.

In no direction has the tendency to increase shown itself more emphatically than in the cost of erecting and keeping in repair buildings of every character. Tenements, private residences, factories, store and office structures, are all equally affected, and the day laborer must pay his proportion of the increase in the form of rent for the tenement he occupies just as the merchant or manufacturer does for his fine residence, his modern factory building or his elaborately finished office. But a distressing circumstance in connection with the matter is that the advances in cost, as intimated above, bear with rather unequal weight on the various classes and conditions of persons called upon to pay them.

For obvious reasons it is in the cities, and particularly the largest ones, that these and other advances in the cost of living have been the greatest.

Rents are now very high, and yet it seems quite probable that they will continue to rise, at least while the stimulating causes are still operative, and at present there seems to be no good reason to look for a cessation or even a modification of these influences. The growth of population maintained at anything approximating the present rate and the continuance of the agitation for still higher wages and shorter working time in the building trades, the success of which present indications seem to favor, cannot result otherwise than in greatly adding to the cost of building and necessarily, therefore, in a still further advance in rents.

The increase in land values in the large cities naturally following the growth of population has contributed largely to sending rents up, as has also the greater elaborateness of construction and the more expensive material used in almost all classes of buildings.

High rents are therefore of necessity the order of the day for all classes, although many who must pay them, particularly those who rent homes, are without the consolation of having received out of the increased cost of building—either directly or indirectly—any accession to their own incomes. The building trades workmen are probably the only class of wage earners who have secured during recent years very large advantages in the matter of wages and working hours. In neither of these respects has there been any marked change in the circumstances of persons engaged in other occupations, although these constitute by far the largest part of the home-renting class of our population. With but little, if any, increase in wages or salaries, persons who form this numerous class find themselves called upon to pay rents that range as high as fifty per cent. in excess of the figures of former years.

Considering that, generally speaking, those who rent homes, whether the same be private residences, flats in modern apartment houses, or rooms in ordinary tenements, are sure to secure the very best that even by pinching in other directions their means can be made to cover, it follows that any increase in the established outlay for this purpose must be productive of serious distress even to those who are able by any means to meet it, and for those who cannot, there is no resource but to seek a cheaper habitation in a less desirable location with, as a matter of course,

fewer of the comforts and adornments of home than the family had previously been accustomed to enjoy. A sufficient number of people are thus being forced into the more ordinary tenement districts of the cities to cause a marked advance in the rents of habitations in these neighborhoods also, the older residents of which being in many instances obliged by such competition to go several steps lower in the social scale in order to find places of residence at figures within their means. A distinct retrogression in the matter of home environment from which recovery, if it occurs at all, must in many cases be slow, is thus forced upon large numbers of families who in this way become victims of circumstances which, so far as they go, seem to suggest that prosperity, as the term is generally understood, is to a large extent a condition under which the advantages enjoyed by some are secured through processes that involve hardship and deprivation for others who are not so fortunate.

The purpose of this inquiry is to ascertain just what changes have taken place in wages and working hours during the ten years between 1896 and 1906, and incidentally how far rents for the different classes of buildings have been affected thereby. The rise in the cost of material has not been gone into because although it is unquestionably an important element in the final cost of buildings of every kind, such increases as have taken place in prices are to a large extent chargeable to the higher wages now being paid to workmen engaged in its production. With only one exception, therefore, the occupations included in the inquiry are limited strictly to the building trades as distinguished from those engaged in the production of building trades *material*. Although their work tends to the same end, a little consideration of the subject and its associated facts will show the wide difference between these two classes of workmen in the matter of compensation, without at the same time suggesting any equitable reason why it should exist, at least to the extent that prevails at present.

The bricklayer, carpenter, painter and plasterer, who are representative types of building trades mechanics, have wage and working time rules, strictly enforced as a general thing, that ensure them approximately twenty-five dollars for a week's work of forty-four hours, while the brickmaker, terra cotta moulder,

lumber mill, and sash, blind and door workmen, the operatives employed in the conversion of cement rock into the building cement of trade—men who have practically no rules of any kind made by themselves—work sixty hours for a weekly wage that in the case of none of them exceeds twelve dollars.

The difference in wages is fully 100 per cent., and in working hours 26 per cent., in favor of the building trades workmen, not all of which can in fairness be accounted for on the grounds of superior skill, and certainly the preference should not be attributed to any greater severity in the character of the labor performed by the favored classes of tradesmen.

Men employed in the manufacture of paints may require as much intelligence for the successful performance of their particular tasks as do those who afterwards apply the same material to the walls or wood trimmings of a house; but the *compounder* of paint averages only about sixteen cents per hour as wages, while the *painter* receives forty cents for the same time, and yet all authorities on the "diseases of occupations" will agree that as between these two trades, the lowest paid one is much the most dangerous to health.

The same disparity in the compensation and other circumstances surrounding workmen who produce building material, as compared with those who apply it to final uses, is conspicuously apparent throughout the whole range of such occupations, and without exception the advantage is largely on the side of the latter class. One fundamental cause which exists independent of all questions of skill seems to lie at the bottom of these differences in working conditions, and that is the fact that many varieties of material are produced almost entirely in the smaller communities or the most sparsely settled districts, while by far the greatest part of it is finally used in the largest cities and towns; and that labor organization, the visible agent of improvement, appears to flourish in the large cities, while seemingly unable to secure even a foothold in the smaller places. Labor in the organized branches of industry is in a position to make its own terms, being in virtual control of its respective trades, but the much more numerous groups employed in the unorganized lines still show the results of free competition in their comparatively low wages and long working hours.

However, it is no part of the purpose of this inquiry to enter into a discussion of the inequality of workmen's wages, or to express an opinion on the ethical justice of a labor system which allows such wide differences in compensation for work of practically the same utility and importance. But reasoning from the assumption that the entire profits of industry, if devoted to wages alone, would be scarcely sufficient to bring the compensation of all classes of labor up to the high standards established by some of the unions for their own members, the investigator can scarcely fail to reach the conclusion that if wages were or could be fixed solely according to the value of services rendered, without pressure of any kind in favor of any class, such a system of distributing the earnings of industry would be far more equitable than that which prevails at present.

Dismissing, therefore, the question of inequality in wages as one of only collateral relation, the main subject of the inquiry, that is to say, the changes that have taken place in the wages and working hours of building trades workmen will now be taken up and the facts presented just as they were developed by the investigation.

The field of inquiry was limited to Essex county, because within that district all the elements required for carrying out the purposes in view were more easily accessible than elsewhere in the State. The detailed information presented in the following pages was, with the exception of that relating to the lather's trade, obtained exclusively from employers in the several lines of industry who had been in business for periods ranging from eight to forty years.

The trades or occupations considered are fifteen in number, viz.: Carpenters and builders; masons and builders; plumbers and steamfitters; painters and paperhangers; lumber mill workmen; stone cutters; metal cornice makers; mantel and tile workers; slate roofers; structural steel and iron workers; parquet floor workmen; stair builders; opulent glass window makers; concrete paving and construction workmen, and wood lathing, the details regarding which trade were obtained from an officer of the union. The headings, which were as follows, will show the character of the information that was sought to be brought out by the inquiry.

1. Business in which engaged. 2. Average number of workmen employed. 3. Number of years in business as employer. 4. Wages per day of workmen at the present time. 5. Wages per day of workmen at the time of first starting in business. 6. Number of working hours per day at present. 7. Number of working hours per day at time of first starting in business. 8. Efficiency of labor at present, compared with that of earlier years—percentage of increase or decrease. 9. Is business run on the union or open shop principle? 10. If union men are employed exclusively, has coercion in any form been used to bring about that condition? 11. Division of daily working time—number of hours in the morning, and number in the evening. 12. Is a Saturday half-holiday allowed? 13. Do workmen start promptly at the time fixed in the morning, and also after the noon lunch hour? 14. If start is not made promptly, how much time is lost in that way per day? 15. What, if any, are the apprenticeship regulations of the trade? 16. Do the union rules seek to regulate the daily product of work? 17. Has the union an official representative among the workmen, and if so, do his acts conflict in any way with the authority of the employer or his representative? 18. Some account of the strikes, if any, that have taken place during the term the firm has been in business: the date, cause, and duration of each of them. 19. Has the union ever attempted to impose a fine on the firm for violating any of its working rules? 20. Has the firm at any time been forced to discharge non-union men, or men who have fallen into bad standing with their unions? 21. Has the advance in wages of unskilled labor been proportionate to that of skilled labor? 22. Has the firm perfect control in all essential respects over its employes and its business? 23. Does the firm prefer the union to the non-union system of labor?

The foregoing list of questions are arranged so as to secure the greatest possible amount of information relating to the comparatively new form of business organization that has resulted from the almost complete unionization of the building trades. Neither friendly approval nor unfriendly criticism of the policies pursued by either side is intended, and such sentiments have not in even the slightest degree influenced the course followed in collecting the information or in the manner in which the facts and deductions are presented here.

That some of the details brought to light show a certain amount of friction in the relations at present existing between some of the building trades workmen and their employers there can be no doubt; the advantages gained in the matter of increased wages and reduced working time are the results of united demands on the part of the unions, which, in some instances, were enforced by strikes of long duration and serious costliness to both sides. But the conditions thus established appear to be in the main, if not entirely satisfactory to both sides, at least sufficiently so to permit building operations in the State's most important city to be conducted with effectiveness and a fair degree of harmony between employer and employee.

As before stated, the information here presented is derived entirely from statements made by employers. It is from their point of view exclusively, and, within the limits established by the questions asked, accurately reflects their judgment on the manner in which the business side of the industries considered is affected by the new order of things.

Statement from Employers in the Building Trades.

Carpenters and Builders.

Statements were obtained from ten firms or individual employers engaged in business as carpenters and builders. The aggregate number of workmen employed by these firms at the time of making the canvass was 767, or an average of nearly 77 to each employer; the aggregate number of years experience in the trade was 249, or within a small fraction of averaging 25 years for each firm.

Several of the employers who have had the longest continuous experience in the trade state that twenty years ago the working time was 59 hours per week and the wages \$15.00.

One of the firms employing at the present time 100 workmen reports the changes that have taken place in wages and working

hours from and including 1891 to and including 1906; these were shown to be as follows:

Year	1891.	1896.	1897.	1903.	1905.	1906.
Working hours per day.....	9.00	9.00	8.00	8.00	8.00	8.00
Wages per day.....	\$2.50	\$3.00	\$3.00	\$3.28	\$3.60	\$3.80

From 1891 to 1897 the hours of labor were 54 per week; in 1897 the hours were reduced to 48, which remained the limit until 1903, when the Saturday half holiday having been generally established they were again reduced—this time to 44 per week.

Restricting the comparisons to the last ten years, the figures above quoted show that the reduction in working time per week amounts to ten hours, or 18.5 per cent., while wages have advanced during the same period from \$18.00 to \$22.80 per week, an increase of \$4.80, or 26.6 per cent. This statement agrees in every respect with those made by nine other firms.

Briefly summarized, carpenters are now paid 26.6 per cent. more money in wages than they received in 1896, and are required to work 18.5 per cent. less time per week in order to earn them. Assuming, therefore, that the efficiency of the workmen remains the same—that is to say, that their product per hour has been neither increased nor diminished but is practically as it was ten years ago, it then follows that the net increase in the cost of building, so far as the labor of carpenters is concerned, is equal to the combined percentages representing the reduction in working time and increase in wages, which is 45.1 per cent.

As to the question of the efficiency of labor under present conditions, compared with that of ten years ago, all the firms reporting agree in the statement that it is decidedly less efficient. When requested to make a statement showing, according to their experience, the average falling off in the quantity of work accomplished by carpenters, four of the ten reporting gave 15 per cent., one 12 per cent. and two 10 per cent. The three remaining employers were not prepared to say just how much the product of a day's work had diminished, although they joined the others in declaring it to be noticeably less.

The average decline in efficiency, as represented by the statements of the seven employers who reported, was 13 per cent.,

which, when added to the 45.1 above referred to, shows the labor of carpenters engaged in building to be now a fraction above 58 per cent. more costly than was the case ten years ago.

The question that evoked the answers from which the conclusions given above were drawn was number eight on the inquiry blank, and reads as follows: "Efficiency of workmen at present compared with that of past years? Is their product greater or less per hour? Give the percentage of difference, if any." The following is a comprehensive summary of the replies received:

1. "We have a number of superior workmen but there are very few *all around* men, as in the past, who could do cabinet and hard-wood work, build artistic stairway, etc. Nearly all the best men are now employed on special lines and are efficient workmen; the product, however, is not so large per man as in former years."

2. "Machinery has become so large and important a factor in the trade that the more competent workmen accomplish more and better work, but the average man not so much. These last, being in the majority, the total amount of production per hour is less by ten per cent. or more."

3. "Some men are more efficient, but the majority are only ordinary carpenters, and their product is less by a considerable percentage."

4. "The average efficiency of certain men is not so good, some having learned only parts of the trade, and not all branches as in former years. Their product of work for the time employed is therefore less in quantity and not so satisfactory as to quality. The total falling off is probably not less than 15 per cent."

5. "The efficient workman who is willing and able to give his employer a fair day's work is hampered by the views of the majority who are less skillful and less desirous of giving a fair return for wages. The average efficiency is less per day by more than 15 per cent."

6. "The efficiency of some competent men has increased—that of the majority has not. The product per hour is less; the difference is between 15 and 20 per cent."

7. "The best men do better work, while the less competent, who are largely in the majority, do not. The average product is less by from 10 to 15 per cent."

8. "The intelligent carpenter who is faithful to the interests of his employer can, with all the mechanical aids at his command, turn out better work and more of it. It is only the skilled workman who can do this work, and the demand for this class is daily increasing, while the supply to draw from is exceedingly limited. These men are cheerfully paid an increased amount per hour over the minimum rate, but the far less skilled workmen, who are largely in the majority, produce less per day than formerly."

9. "Certain of our men who have been with us for a long time produce a day's work that is satisfactory as to quantity and quality. But others are inferior workmen and their product is very considerably less, possibly 15 or more per cent."

10. "Workmen differ. A few can turn out expeditiously a slightly piece of work; others cannot, and their work bears no comparison with that of the former class, the number of which is very small. It is generally understood in the trade that the product per hour is less by a considerable amount, say 15 per cent. or more."

These ten firms all report themselves as conducting strictly union shops. The reasons why they do so are given in answer to Question No. 10, on the inquiry blank, which reads as follows:

"If union men are employed exclusively, has coercion been used to bring about that result, or is the employer's agreement to that end a voluntary one?"

The answers returned to this question are all couched in brief terms, and their purport is conveyed with absolute accuracy by the verbatim extracts that follow?

1. "Employers have not accepted the conditions, and to most of them it is now an involuntary one."

2. "Yes and no. Had contracts which must be completed and accepted union conditions because there was no practicable alternative."

3. "No actual coercion was used. Simply had to employ union men exclusively or would be shut out from work where other union tradesmen were employed on the same contract."

4. "This employer has a son working in his shop who is not a member of the union. All other employes are union men, and he employs them because non-union men would be useless on contracts with union men of other trades, as the latter would not work with them."

5. "I have just had to accept union conditions; doing so was in no sense voluntary."

6. "The union has established its supremacy, and there is no use attempting to resist it. Our submission is not voluntary; we are simply in the hands of the unions and must submit."

7. "Have accepted union conditions because we had to do so. Have therefore completely unionized our business."

8. "We cannot truthfully say that there has been any coercion. Nearly all the best workmen became identified with the unions, and it would be very unwise on the part of the employer to oppose them."

9. "In a certain sense it was voluntary. We had the work and wanted the men. It was either to lose the work or conform to the rules of the union."

One of the firms—No. 10—made no statement regarding the freedom of choice it was allowed to exercise in the matter of employing union or non-union men.

The working time per day, as reported by these ten firms of carpenters and builders, is from 8 A. M. to noon, and from 1 to 5 P. M., except Saturdays, when work for the day ceases at noon. The working time is therefore forty-four hours per week. The ten firms make the statement unqualifiedly, that their journeymen do not encroach with idleness on the working time, and that all start with reasonable promptness in the morning and at the expiration of the noon lunch hour, wasting no time through positive idleness during the regular working hours.

The same regulations regarding apprenticeship are, as a matter of course, reported by the ten firms, that is to say, one apprentice is allowed by the unions for every ten journeymen carpenters employed.

In answer to the question as to the working regulations of the unions with regard to product per man, the statements made, while interesting, temperate and fair, still show considerable difference in conditions as observed by the employers.

Four of the firms report that nothing indicating a plan or purpose on the part of the unions to limit the daily product of work has been observed by them, but the others answer in a way that is not so favorable to the workmen; a few of these statements which are fairly representative of them all are here given just as received.

"There may be rules restricting amount of product per day, but we have no personal knowledge of such being the case. Recently we had occasion to employ two extra men to assist in weather-boarding a house; these men worked on the opposite side of the building from our old workmen. At quitting time, the latter had boarded about five feet higher than the two new men. The four men held a private consultation, and the following day the work was equal."

"We believe that there are restrictive rules. One thing we are positively sure of from observation, that is, that the average workman will keep his daily production as low as possible if left to himself. Of course, there are conscientious men and we have had a number in our employ for years; these are good and reliable workmen who strive to render an honest day's work, and would continue with us under any circumstances. The greater part of these men joined the union under compulsion."

"We do not know of any working regulation of the carpenters union limiting production; but we are in a new era and it should be taken as a matter of course that a building trade mechanic is not overworking himself."

"Cannot say positively that there are rules restrictive of production. It is generally understood in the trade, however, that less finished work is now produced per day than was the case in the past. Believe our old and reliable men give a square day's work, but am sure others could or ought to do better."

In answer to the question—"Has the union an official representative among the workmen, and if so, do his acts conflict in any way with the proper exercise of authority by the employer or his foreman," the following replies will fairly indicate the character of those made by all.

"Yes; there is a walking delegate or business agent for each district, as we understand it. He takes the liberty of visiting our jobs and talking to our workmen when he wishes to do so.

We make no objection to his presence, and, therefore, have had no trouble with him.

"There is a shop steward, one of our own workmen, who is appointed by the union to watch and report any infraction of rules that he may observe. His acts, however, have not as yet conflicted in any way with our exercise of authority."

"The walking delegate visits our jobs from time to time, but he has shown no objectionable officiousness, nor has he at any time taken exception to the methods pursued by us. Some employers have of late years taken a rather independent stand, and show less disposition to have their business interfered with by strangers. This stand causes representatives of the union to be more careful."

"Am not quite certain but believe there is an agent or shop steward representing the union among our workmen. Not long ago a walking delegate called at our office and requested permission to go through our shops, which we refused. The man then asked for a certain workman with whom, on being sent for, he conversed for some time. The inference which we drew from the circumstance is that the man called for was the shop steward."

"Yes; there is a shop steward, but do not know who the present one is. Some time ago his identity was revealed, but the union made a change soon after. Think we have reason for believing that the union has a confidential agent among our workmen."

The experience of the ten carpenter firms in the matter of strikes, their cause and duration, are all substantially alike. Each reduction in working hours and increase in wages has been preceded by a strike of a more or less extended character. The additional fifty cents a day, secured in 1896, and the reduction in working hours from 9 to 8 per day, which took place in 1897, were the occasion of strikes that in each instance lasted about two weeks. Subsequent demands for increases in wages, made in 1903, 1905 and 1906, and for the Saturday half holiday, were granted either under threat to strike or after work had been actually suspended, although for only a short time. Some few of the firms conceded the higher wages as soon as the demand was made, but their men were obliged by the union rules to remain idle until all the employing firms had agreed to do the same.

The attitude of most of the employers towards the demands of the union is fairly set forth in a statement made by one of them, which is, in effect, that after the struggle of the earlier years in which the unions had demonstrated their control over the trade, employers generally have come to realize the futility of resistance and are now inclined to acquiesce in almost any demand the unions may make, provided owners are willing to bear the incidental cost, or, in other words, as long as the increases in wages do not outrun the prices that owners are willing to pay, building trades employers will have no very strong incentive to resist such demands.

The degree of liberty allowed to both the master carpenters and journeymen under union rules, that is to say, the latitude permitted to one class in selecting the workmen it is to employ, and to the other in choosing affiliations which it deems most advantageous, is strikingly shown by the statements made in reply to the question: "Has the employer been forced to discharge men whose work was satisfactory merely because they were not members of a union," some of which were as follows:

1. "Yes; employed non-union men, but was compelled to discharge them; since then have had union men only."

2. "Yes; some years ago; had men in my employ a long time who were faithful and capable, but who would not join the union, preferring to be independent. Some of these men went into the union on my advice; others who refused to do so were discharged at the demand of the union. I believe that later the largest part of these joined the union as the only means of securing and keeping employment."

4. "No; have a son working in my shop who does not belong to the union, and as yet nothing in the nature of an objection has been urged against him. Incompetent men, as a rule foreigners, cause the most trouble. They rush to the union with the most trifling grievances and are always the first to urge a strike."

5. "Found some ten years ago that the main principle of unionism was the refusal to work with non-union men; was restricted in the matter of employes to those who were willing to join the union on one hand and whom the union was willing to admit on the other. A number of desirable men were thus available only at the risk of having to fight for the right to retain

them, and as the majority of workmen were members of the union there seemed to be nothing for it but to employ them exclusively."

6. "No; we employ only union men; have never made a stand for the open shop because we believe it would be entirely useless to do so. We took on a good workman at one time who was a member of the Amalgamated Brotherhood of Carpenters and Joiners, and we were notified that the man must join the local union or be discharged. We needed his services especially at the time and advised him to join. Unjust as the demand was, he had to join the local union and pay the fees."

7. "Yes; we have carefully avoided anything likely to lead to strife with the unions, and, therefore, when we found a good man who was not in the union we advised him to join. If he preferred not to do so we had to let him go."

The other employing firms in answering this question have limited themselves to brief statements showing that they have accepted union conditions absolutely, but mostly as a matter of expediency, and that, therefore, they invariably see to it that all men employed by them are in good standing with the union.

One of the union rules that appears to be regarded with dissatisfaction by a majority of the master carpenters is the minimum wage rate, under which it is claimed employers are obliged to pay high wages for what often proves to be very inferior service. The prevailing sentiment regarding the matter is that the minimum wage rate as now established is fair for the better class of mechanics, but relatively much beyond the deserts of the indifferent or inferior workmen who, after all, are in the majority. In answer to a request for statements of their views on the subject, replies were received from each one of the ten master carpenters, the general tenor of which is fairly reflected in the two following examples:

"Yes; the advantage of the minimum wage rate and also, it may be said, of almost all other rules established by the unions is in favor of the inferior workmen, and in almost the same degree detrimental to the more accomplished and superior mechanics. Even the most indifferent workmen who are hired under the pressure of hurried work must be paid the same as a really skillful man. Strikes do not occur in dull times but only

in a condition of great business activity. It is then the influence of the unskilled mechanics begins to make itself felt. They are, as a rule, the leaders in all the trade troubles. As a matter of fairness and justice we have always endeavored to recognize and compensate our best workmen by paying them from five to ten cents per hour in excess of the union rate."

"The advance in wages has been very much in favor of the unskilled workmen. Men to-day are receiving the minimum rate who are not worth it. When times are prosperous and the trades are rushed we must employ these inferior mechanics, but when work slacks up they are the first dropped from the payroll."

"The unskilled men's wages are now on a par with those of the most skilled workmen. As to the injustice of this state of things, there is but one opinion among employers."

In answer to Question No. 22 on the inquiry blank—"Has the employer perfect control over his business in all essential respects," the following answers were received:

1. "So far as I am concerned, yes. I employ only five men; if I had more, it might be otherwise."

2. "Not under all circumstances. Was obliged at one time, in order to finish a contract on a certain date, to put several young men, nearly out of their apprenticeship, to work laying floors. Received notice from the union that only one apprentice for each ten journeymen could be allowed on the building, and so had to reduce the number."

3. "Yes; but employ only a small number of men. The larger the body of employes, the greater the liability to dictation and interference on the part of the union. The feeling between employers and the unions is not a really cordial one."

4. "Yes; but my business is a very small one."

5. "Thus far had control of business, yet my position is not an independent one."

6. "Yes; to a certain extent. Would prefer to be more independent, but cannot under the existing circumstances."

7. "No control. Unions dictate and although much 'kicking' is done, employers finally give in if business is good."

8. "We have control of our business and are independent so long as we do not infringe upon the rules of the union."

As to whether the union or the non-union system of labor is most desirable, the opinions expressed on the subject by employers in answer to that question are fairly reproduced in the following extracts, which closes the information obtained by the inquiry so far as the relations between the master carpenters and the union journeymen are concerned.

"No man can feel other than a strong dislike to having the control of his business pass into other hands; but as apparently the union is an established fact, he must needs conform to its rules."

"It is not at all a question of preference. The union is here, strong and arbitrary. As employers of large numbers of men in this and other States, we have so much at stake that we must conform to the rules of the unions, no matter how disagreeable they may be."

"Prefer the union because we have no choice in the matter. Our motto is to 'follow the crowd,' to do as the rest do. We have had on the whole but little trouble with the unions. In the strikes we could not see how the men could fail to win out in the end, and therefore gave in to their demands as gracefully as possible."

"Prefer the union if properly conducted. We agree with some others in business that it is easier to deal with men collectively."

Bricklayers and Masons.

Seven firms of master builders in business during periods ranging from 12 to 40 years, and who employed at the time the inquiry was made an average of 56 journeymen and helpers each, contributed the information relating to working hours, wages, and the general conditions brought about in relation of

employer and employee in that trade through the influence of the unions. The changes in wages and working time from 1890 to 1906 are shown in the following table:

YEARS.	Working Time.		Wages.	
	Per day.	Per week.	Per hour.	Per week.
1890.....	9	54	\$0.33 $\frac{1}{3}$	\$18 00
1896.....	9	54	0.44 $\frac{1}{2}$	24 00
1901.....	8	48	0.50	24 00
1903.....	8	44	0.55	24 20
1905.....	8	44	0.60	26 40
1906.....	8	44	0.65	28 60

The hours of labor as shown by the table above were 9 per day and 54 per week until 1901, when they were reduced to 8 per day and 48 per week. In 1903 the Saturday half-holiday was established, which brought the weekly working hours down to 44, or a little more than 18.5 per cent. less than they were from 1890 to 1896.

The wage rate per hour was 33 $\frac{1}{3}$ cents in 1890, and 65 cents in 1906; the increase therefore has been 32 $\frac{2}{3}$ cents per hour, or almost exactly 98 per cent., during these 16 years.

As shown in the table, the weekly wages were \$18.00 in 1890, and \$28.60 in 1906—an increase of \$10.60 per week, or nearly 59 per cent.

Following the same rule as was observed in the carpenters trade of considering only the changes that have occurred during the ten years preceeding 1906, we find that in 1896 the working hours were 9 per day, or 54 per week, the wages 44 $\frac{1}{2}$ cents per hour, or \$24.00 per week. In 1906 working hours had been reduced to 8 per day, with a half-holiday on Saturday, and wages had been increased to 65 cents per hour, or \$28.60 for a week's work of 44 hours.

The reduction in working time is therefore 10 hours, or 18.5 per cent. per week, while the increase in weekly wages has been 16.8 per cent. Combining both of these items, the conclusion is inevitable that on these accounts alone the labor of masons and

bricklayers is now 35.3 per cent. more costly than it was ten years ago.

As shown in the preceding table, working hours per day and per week for men engaged in this trade were 9 and 54 respectively from 1890, the earliest date from which a record could be found among the employing firms, up to and including 1900, a period of ten years, during which time, so far as could be learned, no change whatever had taken place in the duration of the established workday. Wages, however, which were fixed at 33 1-3 cents per hour and \$18.00 per week in 1890, had been advanced to 44½ cents per hour and \$24.00 per week in 1900. The increase was 33.3 per cent. in both the hourly and weekly wage standards during these ten years.

In 1901 the hours of labor were reduced to 8 per day and 48 per week. Wages per hour having been advanced at the same time from 44½ to 50 cents per hour, which left the weekly earnings on full time practically the same as they had been, that is to say, \$24.00 per week.

In 1903 working hours had fallen to 44 per week, but a compensation advance in wages of 5 cents per hour had been secured at the same time, which still maintained \$24.00 as the weekly earnings on full working time.

Conditions remained stationary with regard to working time and wages until 1905, when the latter, which had been 55 cents, were fixed at 60 cents per hour, thus bringing possible weekly earnings under full time up to \$26.40 per week. The year 1906—the latest to which the inquiry has been carried—saw the wages of this class of workmen advanced to 65 cents per hour, and a possible earning capacity under full working time of \$28.60 per week of 44 hours.

Since 1901, a period of six years, there has been no change in the hours of labor per day, but the introduction of the Saturday half-holiday in 1903 has cut the week's work from 48 down to 44 hours.

Striking as are the gains shown by the above figures, many other important advantages not expressed in them have been secured by this and most of the other groups of building trade workmen during the past ten years. In a financial sense, the chief of these are the union rules providing for 50 per cent. in-

crease in wages for work done after the regular hours, or what is known as "time and a half" for all overtime, and 100 per cent. increase, or as generally expressed "double time" for all work done on Sundays or other holidays. During the phenomenal activity in building which has prevailed during the past ten years, these opportunities have been productive of very considerable increases of income in the cases of many thrifty workmen whose good fortune it has been to enjoy them.

As has been already shown, the labor of masons and bricklayers has advanced 35.3 per cent. in cost during the past ten years by reason of largely increased wages being paid for a much shorter workday, but these figures should be either enlarged or reduced as their efficiency as workmen may prove to be greater or less at the present time than it was during the earlier years when longer hours and lower wages prevailed.

As in the case of the carpenters, all the testimony secured by the inquiry points to the conclusion that there has been a noticeable decline in the efficiency of the labor of these workmen, the amount being estimated at 20 per cent. by five, and 25 per cent. by one of the seven employers reporting. One employer stated that while there had been a distinct falling off in efficiency, he was unable to indicate how much the reduction had been.

Accepting 20 per cent. as representing the average decline, although the actual proportion is a considerable fraction larger, we find that this figure added to the 35.3 per cent. previously explained shows the labor of this class of mechanics to have been at the time of the inquiry 55.3 per cent. more expensive than it was in 1896. This, however, is not to be understood as applying to all the masons and bricklayers in the service of these seven employers; on the contrary a majority of them admit having a number of superior workmen who require no watching and whose labor is faithfully and skillfully performed, but with the one exception before noted all agree in the statement that the amount of work accomplished at the present time, taking the various grades of mechanics together, will average 20 per cent. less per man than in former years.

Just what the employers have said regarding the efficiency of present day workmen, compared with those of 10 years ago, is given as received in the following paragraphs:

1. "In proportion to hours employed product is now 20 per cent. or more, less than it was ten years ago. Some of our best men are very proficient in certain lines of work, and their daily product is nearer to the old time standard than that of the less skillful workmen."

2. "There is a very great difference in workmen; some few are first-class in every respect and their work is always satisfactory. Others are fair mechanics—that is to say, they are the average kind; the third class, which is the most numerous, is composed of ordinary men whom the foreman must frequently criticise. In comparison with ten years ago the product per day for an equal number of men is less by 25 per cent."

3. "The majority of workmen are not so efficient as in past years. Some have acquired great skill in special lines, and are consequently in great demand. The average product, however, is very considerably less. This may be caused, at least in part, by the material changes that have taken place in the trade—changes, that is, of style and of material used in construction. Since the beginning of unions there has been no increase in production."

4. "Product per day is from 20 to 25 per cent. less than it was ten years ago. There are a number of mechanics who do excellent work and also a fair quality of it, but the majority do not get above a certain level. This state of things is found everywhere throughout the trade. Builders would prefer to have all their men in the first class, but the market cannot furnish them. At times only very indifferent workmen can be found. Unless a larger number of apprentices is allowed to the trades it will not be many years before some of them will be at a standstill for want of properly trained mechanics."

5. "The daily product is less by 20 per cent. A few men only can be considered skilled workmen, others are fair, and still another and larger class may be rated as ordinary. The trade is generally agreed on this point."

6. "Years ago the business of a bricklayer and mason was much simpler than it is to-day; the fronts of buildings were plain, and the interiors as a rule quite free from ornamentation. A great change has taken place in this respect, and to be a good mason now requires something more than was needed years ago.

A small proportion of men in the trade are equal to doing the best work, but others who far outnumber these can only build side walls and will never be able to do any better. The deficiency in product per hour is fully 20 per cent."

7. "The experiences and difficulties met in the trade are the same with all employers. A few of the men are skillful—a good number are fair workmen—but many who ought not to be rated as masons must be paid the same as the more competent ones. The same may be said of their efficiency as compared with past years. The product is at least 20 per cent. less."

All of the seven firms under consideration conduct union shops, and make the following statements regarding their reasons for having adopted that system:

1. "Employ only union men. If we were to do otherwise we would in all probability have to stop business."

2. "Anticipating that in the end the unions would win, we decided to employ only union men."

3. "Have not been coerced into employing union men, but wanted to remain in business and finish existing contracts, therefore yielded to the demands of the union."

4. "It is our purpose to follow the policy that is most conducive to our interests. When we want a mason we take one whether he is a union man or not. If he proves to be a good man we advise him to join the union, making ourselves responsible for his admission and also for his fee. Unless he becomes a member of the union we cannot retain him, no matter how much we may desire to do so."

5. "When the trades as now are very busy and workmen are hard to get, we must employ only union men. The non-union masons are limited in number, besides which it would be impossible to secure the consent of union men to work with them."

6. "There has been no coercion whatever; exclusive employment of union men is entirely voluntary."

7. "The union is all powerful and resistance, if we were so disposed, would be in vain. We simply must submit because we cannot do otherwise."

The working time per day, reported by all seven firms, is from 8 A. M. to 12 M. and from 1 to 5 P. M., excepting on Saturdays, when all work closes at noon.

As was the case with the carpenters, the master masons and builders report a reasonably prompt starting to work on the part of their men in the morning and also after the noon lunch hour. They also state that but few complaints of loitering during working hours are made to them by their foremen.

The business of these seven firms being operated under union rules, the regulations relating to apprenticeships are therefore necessarily alike for all; that is to say, two apprentices are allowed to each firm, no matter what the number of journeymen employed may be.

Questioned as to there being any rules of the union for the purpose of regulating the product of work per man, the consensus of opinion seemed to indicate the non-existence of such rules, or that if there was such a system the evidence of its existence and operation was very carefully hidden. The fact, however, is pointed out by several of the master builders that production is in reality most effectually limited by the capacity of the slowest man in a gang working on the same line, necessarily the best men have to wait until the slower ones "catch up." But that particular kind of check on production is neither new nor primarily chargeable to unionism; it has always been and always will be, particularly in the "hand trades," for the simple reason that men's ability being naturally unequal, the progress of a group working on the "gang" principle, as masons generally do, must closely approximate the speed of the slowest. An important difference, however, at least from the employers' point of view, lies in the fact that unlike the present time there was no minimum wage rate in the old days, and the compensation of workmen was regulated largely by their speed and ability to turn out good work.

The actual answers returned to the question are as follows:

1. "The rapid workman has to wait for the slow one to finish his line. There may be delays on the part of laborers in bringing the material or the unexpected arises to interfere with continuous work. We have no reason for supposing that the union has working regulations limiting production, although it is quite certain that no employee works after the blow of the whistle, and the daily product is unquestionably less than it was formerly. There may be restrictive rules, but am more inclined to be-

lieve that the falling off is due to the natural relaxation of energy on the part of workmen, due to the fact that their old time individuality has been completely effaced by the discipline of the union."

2. "Do not believe that a limit is placed on the product of a day's work. If there were such rules, they would become known by some means to the foreman or contractors."

3. "There may be at times a disposition to "hang back" on the part of some—not often. When six or more are working on a line, the pace is set by the slow man and the others must necessarily wait. If there is a working regulation, it is a secret very closely guarded."

4. "Know of no regulations as to product per man. The decrease in the quantity of work completed might be regarded as indicating the existence of some such rule, but we have no real evidence of its being so."

5. "Have had no reason for supposing that masons are restricted to a certain amount of product per day. Men differ in their ability to work, and necessarily the better man has to wait for the slower one beside him; that, we believe, is all there is to it."

6. "Have no knowledge of a working regulation of production. The amount of work done per day is very considerably less than it should be when the facilities now in the workmen's hands that were not to be had years ago are considered."

All the master builders agree in stating that they have never been called upon by the unions to punish refractory members in any way. Precisely what is meant by this is, that unlike the experience of employers in some other trades, these master builders have not been called upon to become the agents of the union in the matter of collecting or deducting dues of delinquent members from wages, nor have they been used in any other way for the purpose of enforcing union discipline.

The existence of a "business agent" or "walking delegate," and the frequent presence of such a functionary on their jobs is admitted by the master builders; all agree, however, in stating that although his opportunity for causing annoyance in many ways is very great, no instance could be recalled in which he had done so, at least to a very offensive extent.

Answers to the question relating to strikes, their number, cause and duration brought out the fact that in this respect the experience of all master builders had been alike during the years of transition from the open to the closed shop. All the statements made on the subject agree that each increase of wages and reduction of working hours was preceded by a strike, which, however, was generally of brief duration.

From 1896 to 1906 there were four increases in wages, and two reductions in working hours, each of which readjustments in conditions was signalized by a strike. There were, therefore, six of these disturbances directly connected with the trade and its affairs. Cessations of work in sympathy with other trades on strike, or against such non-union workmen as occasionally find their way to a union job, have been and are very frequent incidents of trade life, but these have had nothing to do with establishing the conditions of the trade, and it is only with occurrences of that character that this inquiry is concerned.

No definite statement regarding the actual duration of these primary strikes could be obtained, but the question is really not one of very great importance outside of the fact that strikes having been a feature of each readjustment of the wage or work-time scale, demonstrates what is perhaps sufficiently well known—that the concessions obtained in these respects were the outcome—not of voluntary action on the part of employers, but rather of pressure brought to bear upon them that was too strong to be resisted.

Answering the question as to whether they had at any time been forced to discharge men whose work was satisfactory merely on the ground of their not being members of a union, the following statements were made by the master builders:

1. "No; not at least since the unions have gained their present ascendancy in the trade. When a specially good man is employed who proves not to be a member of the union, we advise him to join without delay. This has been our practise for years, and there has therefore been but little friction with the unions. If, however, he should refuse to become a union man, we should be obliged to discharge him."

2. "No. All occasion for having to do so is avoided by employing only union men in good standing. Have always in-

sisted on my right to select workmen according to my own judgment, provided of course that they possessed the fundamental qualification of being members of the union."

3. "Have avoided all difficulty on that score by employing only union men."

5. "Employes only union men. Under present conditions would not be allowed to employ a non-union man if I desired to do so. The union men would all quit as soon as it became known that a non-union man was on the job, and such interruptions of work are usually very expensive."

7. "Yes; we have had to discharge men who were perfectly satisfactory as mechanics, but during recent years nothing of the kind has occurred as we are careful to employ only union men."

Just as was the case with the master carpenters, the master masons are emphatic in expressing dissatisfaction with the minimum wage rate, not so much on their own account as because of its unfairness to the skillful and industrious workman who is, through its operation, practically deprived of the recognition to which he is entitled by reason of his superior attainments. The fact that only the minimum rate is fixed by union rules does not in their estimation alter the case in any way, the minimum wage being so high as to practically preclude the payment of a larger rate to any considerable number of workmen whose superior skill might place them above the average.

In the opinion of these master builders the minimum wage rate has benefited the poorest class of workmen very much, but all express doubts as to whether or not there is anything of substantial value in it for the first-class mechanics. Their (the employers) views on the subject are summarized very fairly in the following statement made by one of the number:

"The minimum wage rate of the union is entirely in favor of the less skillful workman, because it insures him wages which he could not otherwise hope to secure. As it is we must, under union rules, pay a journeyman doing the rough work of foundation walls, brick partitions, etc., the same wages per hour as the comparatively accomplished mechanic who lays the fine brick on the front of the building."

Answering Question 22, as to whether the master builder's control of his business is interfered with, or his authority over it impaired in any way, the statements made in point of sentiment agree substantially with those of the master carpenters; the burden of them all is crystalized in a statement made by one of the number.

"Yes. I have full control over my business, but I must see to it that my rules do not conflict with those of the union."

In view of these statements, and believing them to faithfully reflect their sentiments, it may seem strange that the master builders interviewed in connection with this inquiry should, without exception, express a preference, somewhat qualified though it may be, for the union over the non-union system of labor. But such is in fact the case, as shown by the statements on the subject which are given below just as received:

1. "Prefer union to the kind of non-union labor that can be obtained now."

2. "Have no objection to unions when fairly conducted."

3. "Prefer union labor; if union rules would permit a rearrangement of wages, so that the best workmen might be fairly compensated, there would remain from the employer's point of view no particular reason for objecting to it."

5. "Would like to be more independent than seems to be possible under union rules, but have no real objection to the union system of labor"

6. "Would not object to the union system of labor if its rules left it in the power of employers to pay wages according to ability to earn them. In all other respects believe the union system of labor an improvement on the old way of dealing separately with workmen."

Painters, Decorators and Paperhangers.

Five firms of painters, decorators and paperhangers, whose business experience as employers ranged between 2 and 22 years, the aggregate time showing an average of 14 years in the trade for each of them, furnished the information contained in the following statement.

The aggregate number of men employed by these five firms was 100, or an average of 20 for each firm.

The changes in working time and wages that have taken place in the trade during the last ten years are shown by the following table:

YEARS.	Working Time.		Wages.	
	Per day.	Per week.	Per hour.	Per week.
1896.....	9	54	\$0.25	\$13 50
1897.....	8	48	0.28	13 50
1898.....	8	48	0.31½	15 00
1900.....	8	48	0.34	16 50
1903.....	8	48	0.37½	18 00
1906.....	8	44	0.41	18 04

Four of these firms conduct strictly union shops, and one an equally strict non-union or rather "open shop," in which men are employed solely on the basis of their ability to work, and without any reference whatever to the existence or non-existence of union affiliation among them. This firm, however, pays the union scale of wages and operates its business strictly on union working hours. This circumstance does not seem to have earned the tolerance of the union, who still classify the concern as unfair.

As shown by the above figures the hours of labor in the trade were 9 per day and 54 per week for the year 1896, and thereafter 8 per day and 48 per week up to 1906, when during the month of May of that year the Saturday half-holiday was established, which reduced the hours to 44 per week; at the same time an increase in wages per hour was secured which left the weekly earnings practically the same as under the 48 hour regime.

From 1896 to 1906 there were three changes in working hours—reductions in every instance—and five changes in wage rates, each of which being an increase. The reductions in working time during this period amounted to 10 hours per week, or 18.5 per cent.; wages during the same time advanced from \$13.50 to \$18.04 per week—an increase of \$4.54, or 33.6 per cent.

Taken together, these items—52.1 per cent., represent the advance in cost of the labor of painters in 1906, as compared with 1896.

Foremen painters are paid something more per day, usually 25 cents, than the rate for journeymen painters. The best paper-hangers are now paid \$4 per day, which represents practically the same percentage of increase in their wages during the past ten years as that achieved by the painters. Decorators, including fresco painters, are paid much higher rates; the amount depends on the character of the work, and \$15 per day is no uncommon wages for the best. Present day fresco painters of the highest class are almost all foreigners. The master painters believe that this state of affairs will correct itself when in the course of time an art sentiment has been developed among our people, followed, as it naturally will be, by measures for placing proper facilities for instruction within the reach of young men whom nature may have blessed with a capacity to excel in this interesting branch of art.

Regarding the efficiency of labor, two firms state that it has undoubtedly fallen below the standard of former years, but how much they could not, or would not say; of the other three firms, two give 15 per cent. and one 10 per cent. as fairly representing the average falling off in the product of work compared hour for hour with that of former years. For the three firms that have given figures, the average decline in efficiency appears to be, from their statements, 13.3 per cent., which added to the 52.1 per cent. representing the combined results of the reduction of working hours and increase of wages, shows the labor of this class of mechanics to be 65.4 per cent. higher in 1906 than it was ten years previous to that date.

The question (No. 8 on the schedule) relating to the comparative efficiency of labor, was answered by each of the five firms as follows:

1. "Product per hour per man, less by 15 per cent."
2. "In proportion to the number of hours worked, the total product is less by a considerable percentage. It would be very hard to make a reliable statement regarding the matter, because the character of the work now being done is so different to what it was in former years."

3. "In former years young men worked at all branches of the trade—graining, tinting walls, and other high-class interior work, and many of them became very superior workmen. At that time the demand for fine interior decoration was limited, but with the expansion of private fortunes and the growth of culture, a new demand sprung up for artistic work. Few American painters were equipped for this line of trade, and qualified men had to be brought from abroad to do it. The work has since remained in the hands of these foreigners who must be paid whatever wages they choose to demand. The daily product of ordinary work is less by 10 or 15 per cent."

4. "Product per man is on the decline. In estimating for work, account must be taken of the reduction in working time and the increase of wages. Then there are the unavoidable delays incident to the trade, and the growing disposition on the part of the men to lengthen out a job. These things all have a tendency toward decreasing product."

5. "Think our men are doing better work than formerly, but the product is less by 15 per cent."

As before stated, four of these firms conduct strictly union shops, open only to workmen who can produce a union card, while the fifth, although paying union rates of wages and working union hours, is non-union in the important respect that the only qualification required for employment in its shop is simply an ability to do a square day's work, and in the effort to get along a man finds himself neither helped nor hindered by the possession of a union card.

As to the influences that have led them to adopt the open or the closed shop policy, these five firms of painters have placed themselves on record in the following terms:

1. "Coercion used to a great extent. Employed an excellent non-union workman at one time, and all the union men threatened to leave if he was not promptly discharged. At the time had no painter whose work was equal to this man's, but was forced to let him go."

2. "Conditions are such that we must employ union men exclusively, or quit business."

3. "Coercion entirely. Can frankly and truthfully say that the employer was scarcely consulted in the matter."

4. "Had to adopt the union system; the only alternative was to go out of business."

5. "Union men are not employed, at least *as* union men. Ours is strictly an open shop, to which workmen are admitted on their *merits* only, without regard to trade affiliation or indeed to anything else whatever, except the capacity to perform an honest, square day's work for a daily wage which is never less, but often more than the rates established by the union.

"Occasionally a union man needing work and unable to get it in the union shops will accept employment from us, but the union soon hears of it, and the man is fined and forced to quit. As a consequence the man's family may suffer, but no consideration is shown for them; the rules of the organization must not be broken."

The working hours reported by all establishments as being now in vogue for the trade are eight per day and four on Saturdays. The daily distribution of working time is from 8 A. M. to 12 M., and from 1 P. M. to 5 P. M., except on Saturdays, when work ceases for the day at noon.

Four out of the five firms from whom the information relating to the trade was derived, agree in stating that the workmen respectively employed by them are reasonably prompt in starting to work both morning and after the noon lunch, and that only an inconsiderable portion of time, if any, is wasted in idleness during working hours. One firm, the one run on the open shop principle, reports that the wages of its workmen found idling their time, is systematically "docked" for each offence.

The one dissenting firm states that work is not started promptly, and that the tendency toward idling during working hours, and inventing pretexts for doing the same, is very noticeable among its workmen.

The proportion of apprentices to journeymen allowed by the rules of the union is one to eight; all the firms agree, however, in saying that the rule is practically a dead letter, or that at least it is not enforced with the uniformity necessary to giving it effect. There is unquestionably a strong disposition on the part of journeymen, whether employed in closed or open shops, to limit the number of apprentices, because of their apprehension that otherwise the trade may become overcrowded. This policy

appears to be carried out whenever possible, regardless of the cumulative demands of the trade for a greater number of skilled workmen. "The prevalent fear of overcrowding the trade must soon result in our being forced to go abroad for workmen," is part of a statement on the subject made by one of the employing firms, which seems to fairly reflect the opinions of many master painters and decorators.

Some difference is shown in the character of the statements made by employers on the subject of the union having a rule limiting its members to a certain amount of product per day; the fairest way, therefore, of presenting the matter seems to be by allowing the expressed opinions of these master painters to speak for themselves. These are as follows:

1. "There seems to be an intention to work only up to a certain limit. Have heard one workman reproach another for rushing a job through."

2. "A considerable number of workmen strive to give a fair day's work, but many have to be watched by the foreman to see that they earn their wages."

3. "We don't know for certain; our men work with a fair degree of fidelity, but there seems to be an understanding about quitting in the evening somewhat in advance of the regular time."

4. "It is generally understood that regulations do exist limiting product, but nothing is said. The unions are arbitrary, and workmen are not apt to talk on the subject."

5. "Neither union nor non-union men evince any desire to make haste, particularly if the job is an expensive one, which offers a prospect of getting more time in by slowing up on the work. Still, on the whole, the average day's work performed by painters is honest and fair."

Answering the question as to the existence of a business agent, or walking delegate representing the union, the four firms that employ exclusively union men report that such a functionary visits their several jobs from time to time, but they confine themselves to inspecting the membership cards of workmen, with a view to procuring the discharge of men who may be unprovided with that credential. Otherwise, they have never interfered with the business and little or no trouble to employers has resulted from their activity. The one firm considered which

conducts business on the open shop system reports that its jobs are frequently visited by the union business agent, but only for the purpose of detecting and ordering off any union workmen that may have surreptitiously entered its employment. Such instances are said to be not numerous, however, and otherwise the union officials' conduct is entirely inoffensive.

The experiences of the master painters in the matter of strikes seems to have been the same as those of all other building trades employers during the years which witnessed the struggle for supremacy between the unions and themselves. As was the case with the carpenters and masons, each increase in wages and reduction in working hours—both have generally been demanded together—was the occasion of a strike which always terminated in the unions gaining, if not all, at least a very large part of their demands.

From the reports received, it appears that between 1896 and 1906 there were six strikes for the purpose of enforcing demands relating to working hours and wages, all of which were entirely successful from the union point of view. The duration of these compulsory stoppages of work was from three days to six weeks, the larger number being for the briefer time. Work has frequently been and is still being interrupted for brief periods—seldom longer than a day because of some trifling dispute among the unions of the building trades over questions of jurisdiction, the classification of work belonging to each, or the occasional presence of a non-union workman on a job employing several branches of organized labor. However, these petty but irritating outbreaks occur less frequently than they once did, and a growing disposition to believe that under existing industrial conditions, pressing for further concessions in the matter of wages and working hours would be injudicious, is an indication of a tendency toward conservatism on the part of the unions.

Like other building trades employers, the master painters regard the minimum wage rate of the unions as being unjust to them, in that under it they are frequently obliged to pay high wages for inferior work, and also unfair to the really superior workmen who very naturally resent being placed on the same level in the matter of wages with those who bring to their work a much lower degree of personal interest, intelligence and skill.

The closed shop principle bears hard on the independence of employers, as under it each of them has had to discharge at one time or another very efficient workmen for no other reason than that they could not show a union card.

Only one of the master painters, the one who runs the "open shop," asserts he has full control of his business in every respect. He observes the union scale of working hours and wages, doing so of his own accord, uninfluenced by pressure of any kind, but the men employed by him are selected solely because of their abilities as workmen and on no other grounds. The other four, who employ exclusively union labor, complain in terms of varying intensity of the extent to which their liberty of action is hampered by rules in the making of which they are not consulted. One of them, answering the question: "Has the employer perfect control of his business in all essential respects?" replies as follows: "The employer's control is far from being perfect. If his rules conflict with those of the union, he must change them or his workmen leave him."

All the master painters express a preference for the open shop system of work, on the ground that under it they would be more independent than they are at present. The one firm of non-union employers however expresses grave doubts as to whether it would be possible, under existing conditions, to run an open shop with a much larger number of men than they employ at present, which is only eight.

Plumbers and Steamfitters.

The number of firms engaged in business as plumbers and steamfitters from whom statements were obtained for the purposes of this inquiry was eight. The aggregate number of workmen in the service of these employers was 168, or an average of 24 to each; the aggregate number of years in business as employers is 180, or an average of a small fraction less than 26 for each firm. Some of these men are plumbers, some steamfitters and others are laborers or helpers to the mechanics who follow

both trades. The eight establishments are run on the closed shop system strictly, and in the evolution of the trades from the conditions of past years, all have borne a part in the contests over working hours and wages that have finally brought about the supremacy of present day unionism.

The number of men employed by these firms individually ranges from 6 to 60, and the length of time they were engaged in the trade as employers varies from 7 to 40 years.

All being strictly union shops, their experiences during the transition period above referred to must necessarily have been very much alike. The statement of one establishment with reference to changes in the wage and working hour schedule may therefore be accepted as correct for all.

The firm whose figures are quoted, employs both plumbers and steamfitters, and has been in business at its present location for a period of 38 years, and had on its pay rolls at the time the inquiry was made a total working force of 50 men.

In 1896 the wages of plumbers and of steamfitters as reported by this firm were \$3.00 per working day of 9 hours, and remained so until 1903, when wages for both trades were increased to \$3.50 for a working day of 8 hours, or 48 hours per week. In 1905 wages were advanced to \$4.00 per day of 8 hours, and 48 hours per week for all except the steamfitters and their helpers, who secured the Saturday half-holiday, thus reducing their working time to 44 hours per week. In 1906 wages and working hours of both classes of mechanics were unchanged. Both paid \$4.00 per day—the plumbers for 48 and the steamfitters for 44 hours per week.

The laborers or helpers were paid \$1.50 per day of 9 hours from 1896 to 1903; \$1.75 per day of 8 hours from 1903 to 1905; an \$2.18 per day of 8 hours during the year 1906. As noted above the steamfitters and their helpers have enjoyed the Saturday half-holiday since 1905.

An analysis of these figures will show that during the ten years preceding 1906, the weekly working time of plumbers had decreased 6 hours, or 11.1 per cent., while their wages were increased \$6.00, or 33.3 per cent. The net increase in the cost of plumbers labor, providing there has been no change in the standard of efficiency, is 44.4 per cent. If the efficiency, that is, the

volume of product per man, is greater now than before these changes were made, the percentage of increase will be proportionately reduced; if on the other hand there has been a falling off in this respect, the proportion, if ascertainable, should be added to the percentage of increase as given above; that branch of the subject will be taken up in its proper place.

The working time of steamfitters shows a reduction of ten hours per week, or 18.5 per cent., and their wages an increase of \$6.00 per week, or 33.3 per cent., making a total increase of 51.8 per cent. in the cost of their labor.

The helpers of both plumbers and steamfitters have gained more proportionately during the ten years than the mechanics whom they assist. Their wages were increased from \$1.50 to \$2.18 per day, an advance of 45.3 per cent., and the reduction in working time per week was, for the plumbers' helpers, 11.1 per cent., and for the steamfitters' helpers, 18.5 per cent.

The question as to the comparative efficiency of labor under existing conditions is answered by the master plumbers and steamfitters in a spirit of moderation and fairness. In their statements due credit is given for the faithful and intelligent service of most of their workmen, and such references as are made to the less capable ones have about them no suggestion of unfriendliness. The natural inequality in the ability of men is recognized, and the only complaint advanced in relation to their workmen is, in substance, that the minimum wage rate being so high, many of the poorer and less ambitious class of craftsmen are satisfied with it, and consequently do not seek to improve their incomes by the legitimate process of improving their qualifications as mechanics.

Verbatim reproductions of the opinions expressed on the subject are given in the following paragraphs:

1. "Many men show marked improvement in efficiency, but the demand for workmen is so much greater than in years gone by, that necessarily large numbers of an inferior kind must be employed, and the average product per man is therefore less by approximately 10 per cent. The expensiveness of our work has been increased by the divisions made in the trade, and these in turn are largely responsible for the disproportion between product and cost that is sometimes complained of. In former years

every accomplished journeyman worked at all branches of the trade; now, such men are either plumbers, steamfitters, gas fitters, or roofers. The line dividing these several branches is very marked. The steamfitters may be in the house of a customer repairing something that falls under his jurisdiction, but under the rules he could not touch a leaky faucet or stop a break in a lead pipe. The plumber and his helper has to be called in to do that job. The same in the case of a leaky roof; the man already on the premises may be perfectly able to make whatever repairs may be required, but the rules do not allow him to do so. A roofer and his helper must be called in and thus the costs are multiplied without really bringing profit to anyone. The charges for the time spent traveling between the shop and the job often very materially increases the total cost of the work."

2. "Workmen, generally speaking, do not turn out the same quantity of work as formerly in the same time. A large number are efficient and faithful workers who honestly earn their wages, but on the other hand, there are many of whom this cannot be said. Their product is less by 10 per cent."

3. "There is a scarcity of first-class workmen, and when the need of more help is imperative, we must take what we can get. The general efficiency is therefore below that of past years. First-class men are in demand everywhere, and the supply is not sufficient to go around. The general product is less by from 10 to 15 per cent."

4. "Most of our men are fine mechanics who impart a special finish and character to their work. Their product is about the same, man for man, as that of earlier years. But it seems to us that with the important improvements now in use in the trade, a day's work of eight hours should equal that which was once done in nine hours, but such is not the case."

5. "First-class men are now doing better work than ever before. Others, of whom there is a large number, manifest little or no ambition to improve, and are not disturbed over the question of product provided they can keep their jobs and receive the same wages as the better man. The average product per man is below that of former years, but how much we cannot say."

6. "Considering all the advantages of improved material, etc., the workmen should, and we believe they do, turn out better work. There are men who will never get to the point of being really good plumbers or steam-fitters, they will be helpers to the last. The only ground of complaint is that these men must be paid the same wages as the best workmen."

7. "Better stock and improved finish even in the cheapest grades, with the large number of modern improvements introduced into the trade for putting material together, has helped the workman to accomplish better results, and, compared with past years, a greater amount of product per day."

8. "A good many men are doing better work and more of it than under former conditions. This should and does, we believe, naturally follow the improvement in material used. The division of labor, or the separation of plumbing from steam-fitting, should also have a tendency to increase the product in both lines."

The eight establishments considered, being operated under union rules, it follows as a matter of course that only members of the unions are employed in them. This condition of things, although determinedly resisted for some years, is now generally acquiesced in, at least by these firms, if not by a majority of the master plumbers and steam-fitters. As is said by one of them, in reply to a question on the subject: "In the settlement of questions between employers and workmen following the long strike of two years ago, it was conclusively demonstrated that the best interests of the trade required that for the future it must work under union rules." Another employer says: "Our policy of employing only union men was adopted without pressure or compulsion of any kind. When starting business, seven years ago, we found that a majority of the best men were in the unions, and it seemed imperative that all our men should be members of the organization."

Working hours, as before stated, are from 8 A. M. to 12 noon, and from 1 to 5 P. M. The steam-fitters and their helpers quit work at noon on Saturdays; all the others work full time.

All the reports agree in stating that work is started up promptly in the morning and after the noon lunch hour, and continued during the day until the proper quitting time.

Nothing could be learned from the master plumbers and steam-fitters relating to the apprenticeship regulations of the trade, the answer returned to the question by each of them being that, "the matter is in the hands of the journeymen." The by-laws of the union, however, furnished the desired information so far as the plumbers' rules on the subject are concerned, and these are as follows: "After the boys engaged as apprentices to the trade at the time the by-laws were adopted have served out their time, one apprentice was allowed for each shop. The apprentice is to serve four years as helper to a journeyman, who is required to instruct him as far as possible in all matters pertaining to the trade, after which time he is permitted to use tools, while working as a junior, for the period of one year. During the last year the apprentice is paid the junior rate of wages, and at the end of his entire term, which is five years, he becomes a journeyman and is paid the union rate of wages."

To change from one shop to another an apprentice must have the consent of his first employer, and also that of the local union of his district.

So far as the steam-fitters are concerned, the reports indicate that in lieu of apprenticeship regulations there exists a custom under which men technically called "helpers" are taken on, who, when a certain time has elapsed, if successful in passing an examination, are rated as "fitters," which promotion advances their wages from \$2.18 to \$4.00 per day.

The unions have an official called the "business agent," who frequently visits jobs, supposedly in the interests of his organization, but the employers agree in stating that his conduct is inoffensive and unobjectionable. No rule of the union exists which limits the product of work per day, so far as the employers are aware; indeed, the very fact before referred to, that some men get through a noticeably greater quantity of work than others per day would seem to be conclusive evidence of the non-existence of any such rule or understanding.

As in all other lines of building work, and from substantially the same causes, strikes have been rather numerous in the plumbing and steam-fitting trades during the past ten years. These, however, with the exception of one that occurred about two years ago which lasted nine months, were merely local disturb-

ances resulting from misinterpretation of shop rules, or disputes over the question of jurisdiction among the several branches of organized workmen engaged on jobs at the same time. These strikes, if they may be so named, seldom lasted more than a few hours, and only in two or three instances was their duration greater than a few days.

The "long strike," the one referred to as having lasted nine months, although undertaken partly to secure an increase of fifty cents per day in wages, appears to have had for its principal purpose the abolition of the steam-fitters' union and the absorption of its members into the plumbers' organization. This latter phase of the strike was really a contest between two unions, in which the preservation of the identity of one of them was at stake. The steam-fitters refused to give up their separate union and continued at work after the plumbers had gone out on strike. The master plumbers agreed to pay the increase in wages, and the effort to force amalgamation on the steam-fitters having failed after a struggle of nine months the strike was declared off.

In answer to the questions: "Has the employer perfect control over his business in all essential respects?" and "Does the employer prefer the union to the non-union system of labor?" only one of the eight firms reporting declares that its business is not controlled by itself to a satisfactory extent, and also expresses a preference for the open shop system of labor.

The other seven express themselves as perfectly satisfied with existing conditions, declaring that their liberty of action is in every essential respect unhampered, and now that business has been adjusted to it they prefer the union to the non-union system of labor. The reasons for this preference, as given by several of the master plumbers, are reproduced below:

2. "No serious objection to the union; almost all good workmen are members. Non-union steam-fitters are not competent as a rule."

4. "We prefer the union because a majority of the best workmen are in it."

7. "Believe the union is advantageous to both employers and workmen."

8. "In certain ways prefer the union system of labor. In the open shop one man makes a demand for more wages which, if

granted, incites others to ask for more whether they are worth it or not. To the more skillful an employer can pay above the fixed amount according to the value of their services, and the less skillful, having themselves assisted in establishing the minimum rate, cannot object."

Wooden Lathing.

The changes of working time in the lathing trade during the past ten years are practically identical with those that have taken place among the masons during the same period.

In 1896 the daily wages were not fixed according to any immovable standard, but fluctuated somewhat above and below thirty cents an hour, and the piece price, about twenty cents per thousand laths.

The standard union wage scale in 1906, which has remained unchanged up to the present time, is, as reported, 50 cents per hour for day work, and for piece work, 30 cents per 1,000 laths. Working time was 9 hours per day, or 54 hours per week in 1896, which on the basis of 30 cents an hour would produce a weekly wage of \$16.20 for full time. On the basis of eight hours per day, and a half-holiday on Saturdays, the standard working time of lathers is now 44 hours per week, and their weekly earnings at the established rate of 50 cents per hour amounts, for full time, to \$22.00 per week. The increase in weekly earnings has, therefore, been \$5.80, or 35.8 per cent., and the reduction in working time, 10 hours per week, or 18.5 per cent. Combining these percentages we find that the cost of the labor of wooden lathers has advanced 54.3 per cent. in ten years between 1896 and 1906.

No change in the general efficiency of labor appears to have resulted from the improved standards of wages and working hours. Like other trades, some men develop an exceptional capacity for rapid work, which in this respect sets them apart from the majority, but the average product per man will compare favorably with that of former years. The men working by

the piece per 1,000, put up more lath as a rule than those who work by the hour, consequently the earnings of swift workers will exceed the standard day pay of 50 cents per hour.

With but few exceptions, all competent lathers belong to the union. The greater number work under men known as "bosses" who take contracts for lathing and furnish the labor necessary for doing the work. Under these contracts, the "bosses" charge at the rate of 55 cents per hour, and if by the "piece," 35 cents per thousand; the extra five cents being the profit of the "boss."

The rules of the union are very strict in the matter of membership. To obtain work and to keep it, a lather must maintain his standing in the union; to neglect doing so would result in his being idle a good part of the time.

The rules of the union forbid their working on a job with non-union men of their own or any other trade that has an organization, and they quite frequently quit work for that reason, and do not return until the objectionable workmen are removed.

All work on churches and schools must be done on the day pay basis, and masons are allowed by the union rules to put on laths where the number does not exceed one thousand.

The question of apprenticeships is entirely under the control of the union, as indeed is the case in all organized trades. The requirement is that they shall serve three years and be governed strictly by the by-laws and shop rules of the union. Only one apprentice is allowed to each shop or contracting lather, but under no circumstances can an apprentice be employed without the consent of the union.

In one very important respect the relations of the journeyman lather to his employer are different to those which prevail between master and man in other trades. The contractor or "boss" is a union man, and possibly one of the head officials of the organization. There are, therefore, no divergent plans or purposes to be reconciled, it being equally the interest and policy of both to strengthen and maintain the power and influence of the union.

Stone and Marble Cutters.

Four firms employing an aggregate of 375 men, or an average of 94 to each firm, furnished the material from which the subjoined synopsis of trade conditions during the past ten years is drawn. The oldest of these firms has been in business for upwards of forty years, and the youngest twenty-three years. The largest number of workmen employed by either of the four firms is 150, and the least is 50. These details are important in that they impart to their statements that quality of authority which is inseparable from many years experience in managing and directing the labor of large numbers of men in the various lines of work peculiar to the trade.

The eight hour workday and the Saturday half-holiday were secured by the stone cutters and their helpers in 1891, and their working time, daily and weekly, has remained the same since then.

Wages of machine men and cutters were \$3.50 per day in 1896 and so remained until 1901, when they were increased to \$4.00 minimum, with a considerable number receiving \$4.50. The next change took place in 1906; while the minimum wage was still \$4.00 per day, a large number of journeymen, probably a majority of the total number, were receiving \$4.50 or \$5.00.

Laborers wages were fixed at \$2.00 and \$2.25 per day in 1896; \$2.25 to \$2.50 in 1901, and from \$2.50 to \$3.50 in 1906.

Accepting \$4.50 per day as representing the average for journeymen in 1906, there is shown to have been an increase in daily wages over the rate of 1896 of \$1.00, or 28.5 per cent. Working hours being as before stated, the same during the ten years covered by the inquiry, that is to say, eight per day and forty-four per week, the cost of the labor of journeymen stone cutters for the ten year period has been increased only by the advance in wages which, as shown above, is 28.5 per cent., and added thereto the proportionate decline in efficiency, which is alleged by three out of the four firms to have been 10 per cent., thus making a combined total of 38.5 per cent.

The wages of laborers receiving the minimum rate of \$2.50 per day in 1906, show an increase of 25 per cent. as compared

with the amount, \$2.00, which was paid in 1896. Those receiving the maximum—\$3.50—who are but few in number, show an increase in wages of 75 per cent.

The following statement made by one of the firms relative to this particular phase of the subject fairly summarizes the opinions expressed by the others:

"The product per man is below what it should be by at least 10 per cent. The proportion of finished work turned out is greater than in former years, but the value of the increase falls below the added cost of the new facilities that have been brought into use for its production. Machinery now does a good part of the hardest work, and the cutter has only the carving and surfacing to do. Under these circumstances, it seems not unreasonable to expect that the hand work being so largely of a comparatively light and artistic kind, the proportion turned out in a given period should be much greater than it is. Of course there are exceptions, and we take pleasure in saying that we have men whose work, both in the matter of quantity and quality, is such as to be perfectly satisfactory to us and a credit to themselves. These high grade men command, as they should, a wage commensurate with their skill."

The four yards are run under union rules, and no journeymen are employed who are not in good standing in their organization. As to whether or not this form of practical alliance between the employers and the unions is voluntary, all agree in declaring that in the beginning the connection could hardly be said to have been established by mutual consent. It was accepted and agreed to by master stone cutters as the only means whereby they could continue in the trade. Without the skilled labor which the unions controlled entirely, any attempt to go on would have been absolutely useless. The new order of things was therefore accepted and lived up to loyally in a majority of cases by both sides, thus bringing about conditions in the trade as years have gone by, under which much of the old time friendliness between master and man has been restored. To quote one of the employing firms: "We have held the unions strictly to the terms of the agreements entered into by them, and have ourselves rigidly complied with every point in the contract."

That this policy has been on the whole productive of satisfactory results is shown by the declared preference for union labor by several of the firms, on the ground that they "would rather deal with their men in a body than singly." The only dissenting opinion comes from one firm—the largest of the number—who say, in answering the question as to their preference for either system of labor, "Without question, we prefer the 'open shop.' The best men would then be paid the value of their services and those who now rate themselves as skilled workmen, but are not, would be paid in proportion to their ability."

The same difference in opinion regarding the existence or non-existence of rules limiting the quantity of product per man is shown in the character of the statements evoked by questions on that subject. Two of the four firms reporting state that nothing indicating such a policy has ever come under their observation; one intimates that it is inclined to believe in the existence of such a rule but offers no evidence in support of its position; another declares unequivocally that it has "unmistakable proof" that there is such a rule, and cites the case of one of its workmen who, it is alleged, was fined for having worked a few minutes after the whistle blew, in order to finish a piece of work that required only that length of time for completion.

None of the firms considered have ever had to discharge non-union journeymen for the very good reason that such workmen have not been taken on at any time since agreements for their exclusion were first entered into with the unions. This course has been followed as part of the policy before referred to, of avoiding trouble by rigidly adhering to the terms of the contract with the unions which provides that only members of these bodies in good standing shall be employed.

In the matter of strikes, all the firms seem to have had substantially the same experience. During the past eighteen or twenty years there have been about twelve contests of this character, having for their purpose in each instance either a reduction of working hours, an increase of wages or restricting the use of machines newly introduced in the trade. Some of these were won by the unions, others were compromised and still others were won by the employers. The controversies involved in such of the strikes as turned out favorable to the employers cannot be

regarded as settled. The unions do not usually submit to utter defeat and the contests that terminated favorably to the masters may have to be fought out once more. The condition of things is aptly set forth by one of the firms in discussing the probability of a recurrence of strikes: "There are few us (the master stone cutters) who believe anything other than that we are now living under an armed truce."

Other Trades Contributory to Building Operations.

Slate Roofing.

Two firms of slate roofers, who employ six and seven men respectively, furnished the particulars which follow. Both these employers have had long experience in the trade, one having carried on business in the city of Newark for eighteen years, and the other for twenty years. Both conduct strictly union shops.

Working time ten years ago, or in 1896, was 10 hours per day and 59 hours per week; wages at that time ranging from \$2.50 to \$2.75 per day. In 1906 wages are reported at 50 cents per hour, or \$4.00 per day of eight hours. The ordinary working time per week is 48 hours, but, working by the hour as they do, the men are at liberty to do as they may please about the Saturday half holiday, there being no fixed rule regarding the matter.

In 1896 the highest possible earnings per week were \$16.50 calculated on the basis of the highest figures reported as the daily wages of that time. In 1906, calculated on the basis of 50 cents per hour, the highest possible earning for a week of 48 hours is \$24.00, or 45.4 per cent. more than it was ten years before that time.

In 1896 the hours of labor were 10 per day and 59 per week. In 1906 they have fallen to 8 per day and 48 per week—a decrease in working time of 18.6 per cent.

Both firms agree in stating that there has been no noticeable increase or decrease in the quantity of work performed per man in these later as compared with earlier years, and that the pro-

duct per hour remains about the same. Under these circumstances the only elements affecting the costliness of the labor of slate roofers at the present day compared with ten years ago are the advance in wages of 45.4 per cent., and the decrease in working time of 18.6 per cent. These taken together show an increase of 64.0 per cent.

Both these shops are conducted under strictly union rules. One employer asserts that he has knowledge of cases in which production is restricted, and that he is convinced that "more work could be done in the same time." The other states with equal positiveness that there are no restrictions placed on the day's work, as he has never observed even the slightest evidence of such being the case.

Apprenticeship regulations seems to allow one learner to each shop regardless of its size. The trade is very close, there being, as reported by these firms, only 35 journeymen in the entire city of Newark. A number of strikes during the past ten years, which in every instance were won by the men, has greatly strengthened the union and placed it in practical control of all the affairs of the trade.

Both firms declare they would much prefer the "open shop" system of labor, but are reconciled to things as they are, seeing that there is no visible prospect of a change.

Mantel and Tile Setting.

Four firms are represented in this branch of the inquiry, two of which handle what are technically known as "stock mantels" in addition to carrying on the tileing industry; one handles "marble and tile" and the other "mantles, grates, brass goods and tileing."

The wood mantels, known to the trade as "stock mantels," are manufactured in the South and West, and shipped to all parts of the country in a finished condition ready to be set up as soon as the tileing is laid. It has been and still is customary for the tilers to set up those mantels, but carpenters have at times objected

to this and quit jobs where these two classes of work were combined, but within the city of Newark no serious objection has been made to the custom.

All four firms conduct strictly union shops and, as a matter of course, employ only union labor.

In 1896 the working hours for tilers were 9 per day, and 54 per week. Wages as reported were \$3.00 per day for journeymen, and \$1.50 for laborers.

In 1906 working hours were established at 8 per day, and 44 per week; and wages at 50 cents per hour, or \$4.00 per day for journeymen, and 25 cents per hour, or \$2.00 a day for helpers.

In 1896 the highest possible weekly wages for a journeyman on full time was \$18.00; in 1906 the highest attainable figure on full time was \$22.00, or 22.2 per cent. more than in 1896. The decrease in working time during the same period was 10 hours, or 18.5 per cent. per week. Combining these figures, a total advance is shown in the cost of the labor of tile setters amounting to 40.7 per cent.; to these figures should be added 10 per cent. for the falling off in average product per man per hour, which is claimed by three of the four firms to have taken place since the era of shorter hours and higher wages set in. The fourth firm dissents from this view, and states that it "believes the journeymen are now doing better work, and in proportion to the hours employed, the average quantity is the same."

Accounts differ regarding the apprenticeship regulations of the trade. The two firms engaged in wooden mantel setting and tiling, state that one learner is allowed for every ten journeymen. The others, who handle mantels and trimmings of brass and other metals, together with tiling, state that there are no apprenticeship regulations, and that it is evident that there is an intention to keep learners out. One of the firms speaking on the subject, says: "If this policy (the exclusion of learners) is persisted in, it will only be a few years before American born young men will have disappeared entirely from the trades. The restrictive rules are growing more strict every year."

As to the existence of rules limiting production, there seems to be a difference of opinion; two of the firms hold that there are such rules, and refer in a resentful way to their existence, while the others declare emphatically that there are no such

regulations in existence, or that if there is anything of the kind it is kept a profound secret by the unions.

The business agent or walking delegate is a functionary well known to the trade; no opposition is made to his visiting workmen on jobs at such times as he desires. All the firms agree in stating that his conduct is generally devoid of officiousness of an offensive character, and that in fact so particular are they all to avoid any infraction of the working rules which have been agreed upon by themselves and the unions, that the walking delegate, if disposed to be aggressive, would find himself entirely without any reasonable pretext for being so.

During the past eight years several strikes have taken place, almost all of them being to enforce demands made for shorter working hours or higher wages; these terminated as a general thing in either partial or complete victories for the journeymen.

That the firms do not regard themselves as enjoying, under union rules, the full degree of liberty in the management of business to which they, as employers, are entitled, is shown by their own statements on the subject. One of them says: "We try to retain control of our business, but fail in the endeavor at times. It has been our purpose now that the union is supreme not to antagonize it, as doing so might easily result in our being shut out of business."

As to whether the union or the non-union system of labor is preferred, the same firm answers as follows: "We cannot object to the union now, because it is the only system under which we can work; we would prefer it to the other if only the policy pursued were a little less dictatorial."

Metal Cornices.

This industry is represented in the inquiry by statements from two firms who have each had ten years experience as masters in the trade and employ at the present time, four, and twenty journeymen respectively. Ten years ago, or in 1896, wages averaged \$2.50 for a working day of 9 hours. In 1906 the

wages have risen to 50 cents per hour, and the work day is fixed at 8 per day, with a half-holiday on Saturday. The reduction in weekly working time has therefore been 10 hours, or 18.5 per cent., and the increase in possible weekly earnings under full time, \$7.00, or 46.6 per cent.

The net increase in the cost of labor in this trade, because of increase in wages and decrease in working time, is thus shown to have been 65.1 per cent.

The firm employing 20 workmen states that unquestionably there has been a distinct falling off in efficiency since the unions deprived employers of absolute power, but does not suggest a figure as indicating the measure of shrinkage. The other firm, the one employing the lesser number of workmen, asserts that the falling off in efficiency has been from 10 to 15 per cent.

Both these shops are conducted under union rules, and are not permitted to employ any other than journeymen in good standing with the organization. Men are reasonably prompt in starting to work mornings and after the noon lunch, but there is a noticeable absence of anything resembling haste in their ordinary manner of working.

Two apprentices are allowed to each firm, no matter about the size of the shop, or the number of journeymen employed. In the experience of these firms, there seems to have been no reason for suspecting the union and its members of a design to limit production by a rule or an understanding to that end, and the belief is shared by both that the falling off is due to weakened discipline resulting from the division of authority between the employer and the organization whose rules he is compelled to obey.

Several strikes have occurred in the trade during the period covered by the inquiry, the purpose of all of them being, as in the case of the other building trades, to reduce working hours and increase wages.

Neither of these firms express themselves as partial to the domination of industry by the unions. Both regard the minimum wage rate as being unfair; if this objection were removed and the workmen could be graded according to the value of their labor, there would be no objection to the present order of things.

Cement Finishers.

In 1896, cement finishers were paid from \$2.50 to \$3.00 per day of 9 working hours, and the laborers or helpers in the same trade received \$1.50 per day. In 1906 working time was reduced to 8 hours per day, or 48 hours per week, and the wages of journeymen and helpers, to 50 cents and 25 cents per hour respectively.

The highest possible weekly earnings of finishers for full working time, 54 hours, in 1896, calculated on the basis of the maximum wage of \$3.00 per day, was \$18.00 per week. In 1906 the highest possible earnings per week on full working time, 48 hours, calculated on the prevailing rate of 50 cents per hour, is \$24.00.

The decrease in working time has been 6 hours per week, or 11.1 per cent., and the increase in wages, \$6.00 per week, or 33.3 per cent. These items combined show that the labor charges in this industry have advanced 44.4 per cent. over the figures of ten years ago.

The firm from which information relating to the trade was obtained, employs an average of 100 workmen, and has been in business as a contractor for various classes of building work during a period of 40 years.

"The business is run on union principles strictly, as the only means of avoiding collisions with other organized trades which could only result in yielding or going out of business," is part of a statement relating to the subject made by the firm. An occurrence which illustrates the consequences of disregarding the letter of union rules, even where they are strictly obeyed in spirit, is cited by this firm; briefly stated it is as follows: "A certain concern—in our line of work in this city (Newark), employing only union men, in an emergency needed an extra force, but no union workmen were to be had as all were engaged; under the circumstances the firm either had to default on its contract, which course would have involved the forfeiture of a heavy penalty, or else employ men regardless of anything other than that they were able and willing to work. The latter course was finally adopted, but when these non-union men com-

menced work, men of all the other trades employed on the building threw down their tools and quit in a body, and refused to return until the non-union men were discharged. Meanwhile, a heavy fine was imposed upon the concrete company for the unavoidable violation of its contract with the union."

The daily product of work per man is said to be considerable lower than it was under the old conditions, the difference being placed at 20 per cent. by this firm. "Responsibility for the falling off is attributed to the fact that individual initiative and free will on the part of the workmen has been to a measurable extent superseded by the rules of the organization. Formerly men endeavored to please their employes with a view to securing legitimate advancement, but under the uniform wage rate and other present day conditions there is no longer the same incentive to do so."

There have been but very few strikes originating in the trade, and these were of brief duration. Much time is lost however, because of strikes of other classes of mechanics engaged on the same jobs, which frequently bring all work to a standstill pending their settlement.

The policy pursued in employing labor has been and is to avoid trouble as much as possible by employing only union men. It has happened, however, in a few instances that some specially desirable man was employed who had no union connection; when the facts became known the firm had to let the objectionable person go, otherwise all his other workmen would have left him.

Complaint is made that "employers in making contracts are never sure that some disturbance may not arise which will completely upset all calculations. There is a feeling of uneasiness through the building trades, and a belief that a crisis is not far off."

Parquet Floor Makers and Stair Builders.

These trades, although held to be distinct by those engaged in them, are, as wood-working occupations, in the same class as carpenters. Their wage rates and working hours are the same at the present time; that is 47½ cents per hour, the Saturday half

holiday being, as with the carpenters, an established custom of the trade.

In 1896 the trades worked 9 hours per day, or 54 hours per week, and the standard wages for the best workmen were \$3.00 per day, or \$18.00 per week. The decrease in working time between that year and 1906 has therefore been 10 hours, or 18.5 per cent. per week, and the increase of wages \$2.90, or 16.1 per cent. per week.

Two of the firms that reported under this heading are stair builders and the third makes and lays down parquet floors and what is known in the trade as wood carpeting. All three are union shops in which absolutely no one not a union man can secure employment.

In the matter of efficiency, many of the workmen of the present day are, it is stated by these employers, equal to those of earlier years; the belief is expressed, however, that the average product per man, taking all grades into consideration, is now less by ten per cent. than it was formerly. If this estimate is correct the cost of labor in these two branches of trade has advanced 44.6 per cent. in the last ten years.

Placing themselves under union jurisdiction was a matter of necessity with these firms, as, according to their own statements, had they not done so all desirable contracts would have been closed to them.

A fair degree of satisfaction with the conduct of their workmen in the matter of starting at the proper time and working steadily all day is expressed by these employers; all agree, however, in declaring that their liberty as employers is hampered by union rules, and that financial loss and mental irritation were in many instances inseparable from their enforcement.

Like other employers in the unionized trades, these gentlemen object mostly to the rule which prescribes a minimum wage rate, as under it they assert many men are being paid more money than they really earn for the business. In the main, however, their attitude toward the union is at least devoid of hostility, if it is not absolutely friendly. "In unions there are things to commend and others to condemn," is the comprehensive way in which their judgment is expressed.

Building Trimmings, Mouldings, Doors, Etc.

The firms, who own and operate wood planing mills in which doors, blinds, sashes, window frames and other wood trimmings used for building purposes are produced, have each contributed a statement toward carrying out the purpose of this inquiry. Fifty-five men, or an average of eighteen to each establishment, are employed by these firms, who have been in business as employers for from 8 to 18 years.

All three of these mills are run on the open shop system strictly, and consequently only non-union men are employed. Union men, the company say, are not excluded from employment by reason of there being any objection to them as such. They do not seek employment in these establishments because the rules of their organization forbids their doing so, and also for the reason that wages are much below the union standard.

Working hours—9 per day—have not been changed during the past 10 years; there is no Saturday half holiday, and consequently the working time per week is, and has been for the past ten years, 54 hours.

The reports agree that in 1906 the wages paid to workmen in these and other mills in which similar work is done was from \$2.25 to \$2.50 per day, with a very few who were exceptionally competent and skillful receiving as high as \$3.50 per day.

In 1896 wages as reported ranged from \$1.50 to \$2.00 per day and no mention is made of any one with the exception of foremen receiving more than the higher amount. Comparing the minimum earnings of both periods an advance of 75 cents a day, or 50 per cent., is shown in 1906 compared with 1896. In the maximum rates for both periods there has been an increase in 1906 of 50 cents a day, or 25 per cent. This result is reached by accepting \$2.50 per day as the highest wages paid to mill workers in 1906, there being, we are assured, only a very small number who receive a larger amount.

These firms have had several more or less determined contests with the unions during years gone by, from which they appear to have emerged with a determination to thereafter conduct business strictly under rules and regulations made by themselves

alone. In fact, the "open shop" was the issue on which these battles were fought, and having won the firms appear determined to cling to the results of their victory.

Men employed in these mills are not classed as carpenters, and do not receive the pay of such. The work in substantially all branches is a machinery product, and operatives require experience more than skill for success.

The unions do not oppose the use of the products of these mills, notwithstanding the fact that the proprietors are, in a certain sense, hostile to the union system of labor. This is the case not only in Essex and Hudson counties, but, so far as is known, throughout the entire State.

A brief consideration of one more industry concludes this necessarily limited study of the changes that have taken place in the building trades during the past decade. This is the manufacture of opalescent glass windows.

Opalescent Glass Windows.

Opalescent glass is used in residences particularly because of the pleasing opal-like tints of color which it presents. It is, commercially speaking, among the highest priced glasses used for window purposes, but the trade being limited in amount of product is among those of which comparatively little is known.

The firm that furnished the information here given employs 8 men and has been in the business of making these windows for only five years back. The period over which comparisons can be made is, therefore, only half that of the other trades considered.

The firm employs eight men, to the best of whom 60 cents per hour is paid as wages. Five years previous to the time of making this report wages were from 20 to 25 per cent. less than they are now, with the same variation in amounts—that is to say, then as at all times the most efficient workmen received the highest compensation.

The working hours are 9 per day, and usually 7 hours on Saturday. This, however, is entirely optional with the workmen, who being paid by the hour may quit work at their own pleasure.

Apprenticeships are controlled entirely by the firm, and the number of learners is regulated by the circumstances of the business as interpreted by the proprietor.

There is a union of the trade and workmen employed by this firm have been solicited to join it, but thus far without success. The number of employes is small, and all appear to be perfectly satisfied with existing conditions which they believe could not be improved, and might be made less satisfactory by joining the union and thereby renouncing the right to control their own actions.

While the firm has never experienced a strike, it is admitted that those occurring in other branches of the building trades have, when successful, influenced its men to request an advance in wages which it was deemed imprudent to refuse.

The control of business is entirely in the hands of the proprietor so far as the work in his own factory is concerned, but when it comes to setting up his finished products in the building it has frequently happened that union men of other trades have refused to work while his men were so engaged. In some instances he was forced to take his men out until the union workmen had entirely finished. Such experiences have intensified his opposition to the unions, and the proprietor declares that he would under no consideration run his business on that plan.

This outline sketch of the opalescent window glass industry closes the study of economic changes in the building trades during the years made memorable by labor's successful assertion of its right to an influential voice in determining the conditions under which it should be employed. The investigation was made in an absolutely non-partisan spirit, solely with a desire to ascertain the facts and to tell them just as they were found to be.

Effect on Rents of Flats and Tenements.

The past ten years have witnessed an almost complete revolution in the character of the houses in which the great majority of people make their homes. The comforts and conveniences included under the general designation "modern improvements," once to be found in the homes of wealth alone, are demanded and have become indispensable features of the residences of a far larger number than formerly, hence substantially all houses of the class known as flats, which are in fact nothing more nor less than improved tenements, are now provided with all these conveniences, and indeed many others, not within reach of the well-to-do house holder or tenant of less than a generation ago, because of their being the inventions of comparatively recent years. The building activity in most of our cities, although largely directed to the production of houses of this character, has yet not been sufficient to meet the demand. This circumstance will in itself account for the increases in rents to some extent, and also justify them to a moderate degree.

The value of land, which, as a matter of course, shows an increase responsive to the demand, is an important element in fixing the ultimate cost of building, but undoubtedly the principal factors that enter into the problem are the cost of labor and material.

With regard to material, we have estimates of several reliable builders placing the advance in cost during the past ten years at from 20 to 30 per cent. The changes in working time and wages of the building trades mechanics and laborers have been considered and their effect on the cost of labor shown; with a few words further for the purpose of summarizing the influence which these new conditions have had on rents, this necessarily brief review of building conditions in Essex county will be brought to a close. The information from which the following statements were drawn was furnished by several gentlemen who have been long identified with the building and real estate interests of the city of Newark.

For over ten years past the demand for modern flat houses has been very active, the most popular types being single, or

three family, and double or six family structures. Prior to this period the great majority of such houses were without any improvements excepting only water on each floor, and in some of them gas in the hallways and living apartments. During that time a radical change has taken place, and most houses are now provided with range, gas, bath and toilet, and often with heat also. Although not expensively constructed, these houses seem to have met a popular demand, and are much sought after. A large number of these habitations were built in one particular district of the city, on the southwest side, convenient to trolley lines leading to the business center of the city, which is distant about two miles.

The lots on which these houses stand are valued at from \$750.00 to \$1,250.00 at the present time, and the houses themselves would, it is estimated, cost from \$4,000 to \$5,000 if built now; this estimate is for single or three family flats. Double or six family houses similarly equipped with conveniences would cost from \$7,500 to \$8,000.

In this district more than 200 houses have been built in the past five or six years, and many others are in course of erection, and more will doubtless follow when the streets are opened and improved. This section owes its start to the low prices at which lots were sold when the new streets were opened. The first prices were \$400.00 and \$450.00, and these have now advanced to from \$750.00 to \$1,250.00 with still higher figures for corner property. About eight years ago, before the streets were opened and sewers, water and gas introduced, these lots were on the market at from \$150.00 to \$200.00. Six years ago these lots could have been bought for \$450.00, or 66 per cent. below present prices, and the same houses could have been erected for at least 30 per cent. less than it would cost to build them now.

The six family flat houses command from \$16.00 to \$21.00 per month for each apartment, and the three family houses rent for from \$18.00 to \$25.00. The cost of maintenance is said to be about 2 per cent. of the valuation annually. A number of these houses are reported as having been sold for prices ranging from \$6,000 to \$9,000.

These buildings are distributed over nearly a mile square of elevated ground, and their occupants are for the most part well-

to-do mechanics, or salaried people employed in stores and offices.

In the north and west parts of the city near Branch Brook Park, the building of flat houses has been carried on very extensively ever since that fine recreation ground was laid out about eight years ago. The character of the buildings erected and the general plan followed in making public improvements, which are all of a superior kind, have been largely influenced by the park. The cost of lots is generally higher than in other new sections of the city, but prices vary according as the streets are paved or unpaved, and the expense of building is of course the same as in other parts of the city, but as in many instances, the houses are larger and more ornate in appearance, rents are as a rule, considerably higher than in the other section to which reference was made.

As before mentioned, there is a marked tendency among mechanics and men who enjoy steady employment at fair salaries to leave the old tenements or comparatively inconvenient apartments for which, ten or more years ago they paid from \$10.00 to \$12.00 per month, in order that their families may enjoy the conveniences and comforts found only in the new houses, believing the increased tax on their incomes for rent to be fully offset by the comfort and healthful surroundings which were thereby secured.

Three and six family flats, old style, situated in more or less crowded neighborhoods containing a mixture of nationalities, in which formerly apartments could be had for from \$7.00 to \$10.00 per month, now command from \$10.00 to \$14.00 per month, and there is seldom a scarcity of tenants, although as a rule this kind of property is illy kept, and repaired only when the necessity for attention is vitally imperative. A large proportion of these houses are in districts inhabited to a large extent by foreign laborers, who congregate together in colonies of their own nationalities. In not a few instances these people lessen their outlay for rent by combining two families in one apartment of three or four rooms, for which they pay from \$4.00 to \$6.00 per month. Some of these people by means of phenomenal economy save enough money to purchase a dilapidated house in one of the run down sections where their countrymen

congregate, and after some overhauling proceed to crowd as many tenants into them as possible, thereby realizing a considerable profit on the investment.

Fair sized one family houses, frame or brick, in nice neighborhoods, some of which are built three on a 50 foot lot, having all improvements, and in fair condition, rent for from \$30.00 to \$35.00 per month; the same in better neighborhoods, \$40.00. Others on still more select streets bring from \$50.00 to \$60.00. These properties are valued at sums ranging all the ways from \$5,000 to \$18,000. All these are said to be advances of from 30 to 40 per cent. over the rents and building cost of six or seven years ago.

This analysis of real estate interests, without shedding much additional light on the conditions, shows the general advance in rents which all recognize as having taken place. Fundamentally, it may be safely said to be due to the general and widely diffused prosperity of recent years which has created a desire for better homes, the supply of which, partly by reason of large increases in the cost of land, material and labor, has not as yet been sufficient to meet the demand. These circumstances, together with a rapidly growing population competing for homes, accounts fully for the advance in rents.

The Bureau of Statistics of Labor and Industries of New Jersey.

A Historical Review.

The report, of which this review forms a part, is the thirtieth in the series issued by the Bureau, and its appearance marks the thirtieth anniversary of the office, which was organized by act of the Legislature of 1878. During all these years the Bureau has faithfully applied the means provided for its maintenance to carrying out the purposes for the advancement of which it was organized; these purposes are compresensively described and summarized in the following extract from the statute defining the character of the work to be performed.

“To collect, assort, systematize, and present in annual reports each year, statistical details relating to all departments of labor in the State, especially those relating to the commercial, industrial, social, educational and sanitary condition of wage workers, and in all suitable and lawful ways to foster and enlarge our manufacturing and every other form of productive industry, with a view to their permanent establishment upon a prosperous basis both to employer and employee.”

A desire for information on the lines indicated by the above extract from the statute had arisen in all parts of the country where manufacturing industry was the dominant interest. The introduction and rapid extension of the modern factory system, under which hundreds of persons, men, women and children, were brought together in immense mills and factories equipped with powerful engines, improved machinery, and the appliances and administrative organization necessary for perfecting the manufacture of products, reducing their cost, and improving their quality, was the commencement of a radical revolution in industrial and social customs. Before this irresistible form of com-

petition, the old methods of productive industry quickly succumbed, and the workman who formerly plied his craft in a leisurely but for the time highly efficient manner, with such simple and inexpensive tools as were known to many generations of skilled workmen who preceded him, was forced to bow to the stern logic of necessity, and relinquish his position of independence as his own employer, to become a wage worker in the great mill, the products of which had driven his own from the market.

This evolution from the simplest to the most complex form of industrial organization under which the place once filled by the mechanic familiar with and expert in all branches of his craft was taken by several workmen who were separately trained in only one of the many branches into which the trade had been divided under the new system, naturally and of necessity brought about an equally great change in the social, moral and educational environment of the people. The factory towns which sprang up in large numbers attracted to themselves the village artisans and their families, thus radically changing the life and character of these communities while re-grouping their former inhabitants under social and industrial conditions that were entirely new.

The passing of the village industries and the growth of factory towns, at least in the eastern section of the country, to which they were almost entirely limited in the early fifties, exerted a powerful influence on two very important movements: First, large numbers of people whose business and habits of life had been disrupted through the advent of the factories, chose rather than accept employment in them, to abandon their old homes and make new ones for themselves in the far West; and, second, the factories themselves proved to be such an attraction to another class, because of the demand for labor which they furnished, that a great and steadily increasing stream of immigrants from the western nations of Europe came to the factory towns in such numbers as to effect a marked change in the racial characteristics of the eastern and middle sections of the country.

Questions of profound sociological interest growing out of these and other co-related changes in the character of our industrial life, which are of importance not merely to factory employes—the class directly concerned—although they, with their

families and dependents, now form by far the largest part of the population of all manufacturing communities, but to the State, as the representatives of all classes. The widespread desire for information relating to factory life and environment, and to industrial conditions generally, led to the establishment of bureaus of industrial statistics in thirty-four States of the Union and also one in the Dominion of Canada. The following chronological record shows the States in which these bureaus have been established and the date of organization of each of them:

Massachusetts	1869	Minnesota	1887
Pennsylvania	1872	Nebraska	1887
Connecticut	1873	North Carolina	1887
Kentucky	1876	Rhode Island	1887
Ohio	1877	North Dakota	1889
New Jersey	1878	West Virginia	1889
Indiana	1879	South Dakota	1890
Illinois	1879	Utah	1890
Missouri	1879	Tennessee	1891
New York	1883	Montana	1893
Michigan	1883	New Hampshire	1893
California	1883	Idaho	1895
Wisconsin	1883	Washington	1897
United States	1884	Virginia	1898
Iowa	1884	Louisiana	1900
Maryland	1884	Dominion of Canada.....	1900
Kansas	1885	Ontario, Canada	1900
Colorado	1887	U. S. Census Office.....	1902
Maine	1887		

Massachusetts, in which the modern factory system had attained its widest development in this country, took the lead in this matter, as she has always done in things pertaining to progressive industrial legislation, and organized a bureau of labor statistics in 1869; Pennsylvania, Connecticut, Kentucky and Ohio did likewise at intervals of one and two years, and New Jersey followed the example of these States by establishing in 1878 this bureau, which will soon complete the thirtieth year of its existence.

That the sentiment which led to the establishment of these important offices was neither local nor ephemeral is shown by the fact that since the establishment of the first of them, nearly thirty-nine year ago, the number has increased until they now cover practically the entire country, and in not a single instance has one of these offices once established ever been abolished.

The United States is now regarded as the foremost statistical nation of the world, and the foundations of statistical science, which has reached such a high point of development here, were laid down by the State bureaus. It was not until 1884—fifteen years after the establishment of the first State statistical office, and when there were thirteen of them in existence—that the United States Department of Labor was organized, with a prescribed program of work similiar in practically all respects to that of the State offices already in the field. That the success of the State statistical offices naturally led to and brought about the establishment of the national department seems to be, under these circumstances, a perfectly reasonable conclusion.

It is worthy of note, particularly by those given to decrying the importance and value of statistical work performed under State auspices, that not until 1884, after thirteen of the leading manufacturing States had taken up the work on their individual accounts, did the general government provide any means whatever for the collection and publication of statistics relating to labor and industry, outside of the comparatively meagre details presented in the decennial census, which were usually of a character that gave but little of the kind of information with which modern sociological science is mostly concerned.

Although a census had been taken by the general government every ten years since 1790, there was no permanent census bureau until the office at present bearing that title was established by act of Congress in 1902—only five years ago. Up to that time the taking of each decennial census had been ordered and provided for by special act, and when completed the force engaged on the work was discharged.

At the time the permanent census bureau was established there were thirty-four State statistical bureaus in exstence in this country, the ages of which ranged from two to thirty-three years, all formed, it may be safely asserted, because of a widespread desire for information of a distinctly sociological character relating to labor and industry, that could not be found in the census publications of either the earlier to later years.

The superintendent of the census of 1860, Mr. J. M. Edmunds, in submitting his report, urged upon Congress the necessity, which even then was recognized, of having a permanent bureau,

not alone for purely census work, but to cover the much wider field subsequently occupied by the State statistical offices. On this branch of the subject Mr. Edmunds said:

"Ought we not, therefore, at the National Capital, now lay the foundation of an institution which shall annually present complete statistical information of the progress of our people in all the pursuits of life; such an institution as should also gather into separate divisions designated by the names of States or Territories, a complete representation of their boundaries and subdivisions, with a history of their progress and advancement in the arts and sciences; their towns, cities and villages; laws, institutions of learning; their agricultural, mineral and manufacturing products, to the end that all persons interested may see and learn as accurately of each State, its people and productions, as could otherwise be seen and learned by the most extended travel and observation.

"Such an institution may be established with but little cost to the government, other than the payment of a small force of competent men, to be engaged in gathering, systematizing and publishing *annual reports* of our agriculture, manufactures, commerce and population. Information for other years than those of the decennial enumeration required by the constitution could be obtained through the various local federal officers without cost, except for blanks, and with *greater accuracy* than has ever yet been obtained through the census returns. The information could be promptly presented to the people while it was still valuable in other than a historical sense."

The significance of the concluding words of the last paragraph, "valuable in other than a historical sense," becomes plain when it is borne in mind that the lines themselves were penned and the census compilation to which they referred completed late in the year 1865, although the facts and figures forming its contents were collected in 1860, and had reference to that year exclusively. It is not surprising that under these circumstances the practical-minded director regarded the belated statistics of the eighth census as of merely "historical value," and earnestly urged the importance of making a change that would bring the system into closer touch with the current industrial and commercial needs of the country.

Continuous investigation of the conditions appertaining to manufacturing industry and its many related interests, with annual reports thereon, was the dominant note in the director's recommendations to Congress in connection with future census work. His advice was not heeded, however, and it was not until forty years later, when the ordinary work of taking the census had grown to many times the magnitude of the earlier years, that Congress, realizing the utter impossibility of carrying it on even within its then comparatively narrow limits without a large and well trained force of experts, provided for a permanent Bureau of the Census. This was done solely for the purpose of enabling the census office to place the results of its work before the public while they were still recent enough to be of some living interest. Included in the act establishing a permanent census bureau was a provision requiring that a census of manufacturing industry shall be taken every *five years*, midway between the regular decennial enumeration provided for by the constitution, thus manifesting a growing perception of the importance to the business interests of the country of securing more frequent information relating to industrial matters than had been heretofore within reach, and showing a desire, on the part of the national government, to approach as nearly as possible in its immensely wider field the standard of *annual* statistics established by the State bureaus.

That any closer approach to the yearly basis can be made in the work of the census bureau seems unlikely. No practical form of organization for such purposes could keep up in the matter of compilation and analytical interpretation, with the colossal accumulation of data which would follow the undertaking of a national yearly census of manufacturing industry, without either the co-operation of the State bureaus or the establishment by the Federal government of permanent offices or agencies of its own in each State. Such offices, if established, would certainly be much more expensive and for some years at least far less efficient than the State bureaus, because of not possessing the knowledge of local conditions which the latter offices have acquired through long continued, patient and intelligent study of the problems presented in their respective fields.

The importance of State co-operation in the statistical work of the nation was thus referred to in a paper read by Dr. S. N. D. North, Director of the Census, at the Nineteenth Annual Convention of Chiefs of State Bureaus of Labor Statistics held in Washington, D. C., on April 28th, 1903:

"In a scheme for the unification of official statistics, *each State should contribute its proportionate share to an orderly statistical view of the entire nation.* Thus every State inquiry would become a link in a long chain of statistical data, every link of which would fit perfectly into every other link. The realization of this scheme involves no larger expenditure of money than is already made. It only means that the expenditure shall be made for a uniform purpose.

"At every point where the census work touches the work of any bureau, board or commission in any State, there the effort should be made to secure uniformity in schedules of inquiry, uniformity in methods of tabulation, uniformity in date of investigation and thus insure uniformity in results as a basis for the comparative use of the statistics. Thus every State canvass would supplement every national canvass and the actual practical value of both would be multiplied many times. Thus also the census would be saved the expense of making many canvasses which the States also make—a saving to be divided among them; but the question of economy is of little importance compared with the intrinsic improvement of official statistical work.

"Great care must be taken in such a movement (co-operation of the National census office and the State bureaus) to encroach upon no State authority, to minimize no feature of any inquiry of local importance, but to aid and encourage all such work. Whatever can be offered to enlist the helpful co-operation of the State officials should be offered freely. As its work develops the census office will find itself in need of State headquarters and central State agents. It can and should utilize trained State officials to this end at suitable compensation with increased efficiency."

Dr. North also pointed out that in the work of the State labor bureaus there is still another and a very important reason for the co-operation which he recommends:

"So many industrial investigations under some government authority are so constantly in progress that there is growing up among manufacturers a feeling of irritation over these frequent calls for information about their business. To reasonable calls of this character they respond with steadily increasing cheerfulness. They are fast outgrowing the attitude so common in the earlier days of industrial statistics that the attempt of the government to find out anything about their business is an impertinent intrusion into purely private affairs. It happens that many establishments had but recently been called upon to fill out schedules for the State bureaus, and they could not understand why the information then given to the State office should not suffice for the Federal census, which it would have done had the schedules been uniform.

"The great questions of to-day concern the relations of capital and labor as associated in industrial enterprise. These are the questions on which legislation will turn more and more in the future. The people demand exact statistical knowledge concerning them. They demand it from the census; they demand it from the State bureaus.

"What are we able to give in response to this demand? Results which are more imperfectly developed than those in any other field of statistical inquiry. The inherent difficulties surrounding the subject are nowhere else so serious. In other branches of inquiry the main thing is an accurate count of individual units, clearly defined, and the proper presentation of the several items of that count in their relations to each other. It is mainly a work of detail along lines fairly well established. But in industrial statistics every phase presents a problem in itself and not one of these problems has yet found a solution which statisticians are agreed is the best and final solution."

Dr. North reminded his hearers that the improvement of industrial statistics must go forward with the hearty sympathy and co-operation of the manufacturer in every line of industry, as the accuracy and value of the results depend upon the good faith and honest intention with which each individual schedule is filled out. "To establish this sympathy and insure this accuracy both the State and National offices should approach the manufacturer with a uniform schedule, asking for nothing more than what may be made useful in 'shedding some new light on the amaz-

ing changes in industrial conditions which are constantly in progress all around us."

In concluding his address Dr. North said, quoting a remark made by Carroll D. Wright, United States Commissioner of Labor: "On the whole, enormous as have been the errors, false as have been many of the statistical statements of official reports, inaccurate as have been many of the calculations and fallacious as have been many of the inferences, political economy has, nevertheless, profited greatly by what has been accomplished."

It is now fifty years since the historian Buckle paid that splendid tribute in his "History of Civilization" to the influence of statistics in uprooting the traditions and superstitions of the past and developing our knowledge of the great laws which underlie all human progress in civilization. "Statistics," said Mr. Buckle, "though yet in its infancy, has already thrown more light upon the study of human nature than all the other sciences put together. In the intervening half century what a tremendous advance has been made in the scope, the methods and the trustworthiness of statistical data. In the interval, the entire system of industrial statistics, as we understand it, has been conceived and developed to its present stage. There is now an opportunity to advance this branch to a point of practical utility hitherto impossible. By co-operation, co-ordination and unification in the work of the census and the State statistical bureaus (the first steps toward which are outlined in the report of your committee) we shall save great sums of money; we shall increase administrative efficiency; we shall bring official industrial data to harmony and consistency; we shall eliminate duplication and remove irritation; we shall increase the intrinsic value of our work, and we shall build up public confidence in the accuracy and utility of industrial statistics. These are ends worthy of our best endeavor."

The report referred to by the Director of the Census in the concluding paragraph of his address to the convention of officers of State statistical bureaus was one formulated by a committee of that body, under the presidency of Carroll D. Wright, on which the Federal census office and the State statistical bureaus were equally represented. The committee was appointed at the preceding annual convention of the association to consider

and report upon a feasible plan by which the work of the State bureaus of industrial statistics and that of the newly established permanent census office of the National government could be conducted under some form of co-operation which will bring about practical uniformity in the lines of investigation and also in the schedules used for making them.

The committee reported having been in conference with the Director of Census, who was in entire harmony with the plan of co-operation. The terms and proposals of the report submitted by the committee met with his hearty approval, and the census office may be relied upon to co-operate with the several State bureaus in all lines of investigation where such co-operation is found to be feasible and desirable. There was to be no disposition on the part of the census office to minimize the work of the State bureaus or interfere with their liberty in any way. The committee and the Director concurred in expressing the belief that the results of co-operation, such as were suggested, would be to improve the quality of the work both of the State bureaus and of the Census office, while adding materially to the dignity and strength of both.

Some of the advantages to be derived, as set forth in remarks by Carroll D. Wright, United States Commissioner of Labor, and William M. Stewart, Chief of the Division of Manufactures of the Twelfth Census, were reducible to the following propositions:

a. Co-operation of the kind contemplated will insure uniformity in schedules, methods and results, thus making possible comparisons between the State and Federal investigations upon the same subjects, and between the reports of the several States from year to year.

b. It will obviate the necessity and disadvantages of constant duplication of work.

c. It will effect a saving of expense both to the Federal government and to the several States.

The special advantages that would accrue to the State were thus referred to:

1. By giving to trained statisticians in State offices the supervision within their own States of the field work of the Census Office when the latter is undertaken in collaboration.

2. By depositing in the State bureaus, whenever desired, complete records of the census work of that State and by allowing State publication of the results simultaneously with their publication by the Census Office.

3. By saving to the State a large part of the expense of supervision, field work, tabulation and compilation.

4. By the insertion upon the several schedules of inquiry or by the use of supplemental schedules embodying special local questions in any State that may desire information in addition to that called for by the census schedules.

5. As time passes the Census Office will require in the several States a permanent headquarters or central State office, and particularly at the periods of the decennial census. A State office equipped with experienced officials and clerks will offer superior facilities, as compared with a temporary office.

In conclusion, the committee declared that in its judgment the State bureaus of labor statistics offer the most practical and most promising field in which to inaugurate broad, comprehensive plans for elevating and standardizing industrial statistics in the State and the Nation. The committee's report was adopted by the convention and a permanent committee of three was appointed to take into consideration the schedules now in use or contemplated by the Federal Census Office and the statistical bureaus of the several States with a view to harmonizing the same. This permanent committee was instructed to report at the next annual meeting of the association upon the best method to be adopted for securing a degree of harmony in scope, schedules, instructions and tabulations for the inquiries to be conducted by the Federal Census Office and the State bureaus of statistics during the year 1905.

An examination of each of the State bureaus was made by a representative of the Census Office, with a view to ascertaining their fitness in the matter of equipment for co-operating in the Federal census work in their respective States, and among the number passed upon and reported competent in every respect was the New Jersey Bureau. Accordingly, the Federal Census of manufacturing industry in 1905 was taken in this State in accordance with an agreement under which the records and facilities of the office were placed at the disposal of the Census Bureau,

the officials of which conducted the canvass of that year, turning over to the State office the data required for its annual compilation of the "Statistics of Manufactures." The chief of this bureau was also requested by the Federal office to assume a limited form of supervision over the census work in New Jersey during that year, but for satisfactory reasons found himself unable to comply.

Efforts are still being made to bring the National and the State offices as closely together as possible, but it must necessarily be a work of many years to fully develop co-operation and collaboration among so many States; ultimately it will be done, however, because the idea is a progressive one, and its realization will mark a great advance in statistical science throughout the entire country.

But little changes, if any, will have to be made in the inquiry schedules in use in the New Jersey bureau, or in the compilation and form of presentation in vogue in the office, in order to bring about a perfect adjustment of these to the requirements of the Federal Census; so far as the statistics of manufactures are concerned, the schedule long in use in the State bureau is in every essential respect similar to that of the Federal Census, and to make it absolutely the same would require but very little change. As a matter of fact, practical co-operation between this bureau and the census office dates back to 1900, when the work of reviewing the data of the twelfth census relating to New Jersey and preparing abstracts of the same for publication in advance bulletins form was, at the request of the Director of the Census, performed in this office.

This much it seems necessary to say in support of the general proposition that State bureaus of labor statistics occupy an important field and meet a demand that can be supplied in no other way, and that these offices wherever established naturally and inevitably followed the growth and extension of manufacturing industry as the best possible means of shedding light upon the consequent changes in industrial conditions. It seemed desirable to show also that this work could not be done by the Federal Census, which, up to five years ago, was merely an emergency organization, without any of the elements of continuity or permanency; called into existence every ten years to

perform the work provided for by the constitution and promptly dissolved again when that was done, with a moral certainty that the experience gained during the progress of the work would count for practically nothing thereafter, as the services of few or none of the hundreds of persons employed could be secured when the time for taking the next decennial census arrived.

What has been said on the subject, endorsed as it is by the judgment of the present distinguished Director of the Census and his able assistant; by Carroll D. Wright, at that time United States Labor Commissioner, and by representatives from all parts of the country who are now engaged in statistical work, should be regarded as sufficiently vindicating the usefulness of the State bureaus and proving the value of their work, not alone to the States in which they exist, but also to the entire nation.

Dismissing this phase of the subject, therefore, the bureau may with propriety, as an incidental recognition of the thirtieth anniversary of its organization, be allowed to briefly review its own particular work in the statistical field and present at least some of the evidences of commendation and approval that have been freely bestowed upon it by the many persons at home and abroad who for good reasons felt impelled to write of it to the office in terms of praise. These letters are so numerous and extend backward over so long a period of time that only a comparatively few of those received during the past five or six years which have relation to the publications issued by the office during that time can be noticed here.

As before stated, this volume is the thirtieth of the series of regular annual reports; the average number of pages per volume is approximately five hundred, or a total of fifteen thousand pages for the entire file from the first to the latest. The contents of these books will be found to cover a very wide range of industrial subjects, in which every line of investigation indicated in the legislative act which established the bureau has received its due share of attention.

The leading feature of the annual reports is the 'Statistics of Manufactures of New Jersey, which fully realizes for this State all the advantages sought for the entire nation by the advocates of a permanent census bureau. These statistics are absolutely correct in every respect, being compiled from certified statements

voluntarily made each year by the owners or managers of every factory or workshop established in New Jersey. The facts and detailed particulars reported each year by these statistics are the same in every respect as those furnished by the United States Census Bureau's reports on manufacturing industry for the entire nation which is made every ten years. As a record of industrial conditions in our State these annual statistics are not only absolutely accurate in every respect, but they are really indispensable if we are to be kept informed about the material and moral conditions surrounding manufacturing industry, which is by far the most important of all our interests, and the one on which our future prosperity most largely depends.

In these statistics the totals are compared in carefully prepared reviews, and each year's report tells its own story of the increase or decrease, as the case may be, in the volume of business done by any one or all of the industries carried on within our borders. No such results would be attainable if we were obliged to depend for information on the figures furnished by Federal Census, which can be compared only once in ten years. As one census may be taken in a year of great activity and the next in one of equally marked stagnation, or vice versa, it requires no argument to show how misleading any conclusions drawn from comparisons of figures obtained under such circumstances are sure to be.

Other important features of the regular annual reports are the statistics of employment on the steam railroads; the cost of living in New Jersey; a series of studies of special subjects that, under the title "Monographs on Economic Topics," have for some years back formed one of the most interesting and instructive chapters of the yearly volume.

One series of these monographs relates to the "disease tendencies of industry." These studies are the result of careful investigations of certain trades for the purpose of ascertaining the effect produced by their necessary processes on the health of workmen employed in them, and also the current liability to their suffering accidental injury while at work. The trades thus far investigated are: Glass manufacture, woolen mills, jewelry manufacture, men's hats, pottery and leather manufacture. Another series of these special publications includes studies on

many subjects of general economic interest, among them being the "Social Aspect of Child Labor in New Jersey," "The Negro in Mechanical and Manufacturing Industry," "The Benefit Features of Trades Unionism," "Apprenticeship Regulations of the Trades Unions," "The New South Wales Plan for Providing for the Unemployed," and the "Economic Changes in the Building Trades of Essex County." Still another series of the special monographs deals with the growth of industry in the State and shows the natural and other favoring advantages that are found in larger measure here than elsewhere. Among the titles contained in this series are "New Jersey as a Manufacturing State," "A History of the Oyster Industry in New Jersey," and reviews of the "silk" and the "clay products" industries.

Another interesting and valuable feature of the bureau's work is the wide variety of information which appears in each annual report under the title "Industrial Chronology of New Jersey." The contents of this chapter consist of a complete record giving the fullest possible details relating to the following subjects:

1. New manufacturing companies incorporated, with their authorized capital and description of the goods to be made.

2. New manufacturing plants established and old ones enlarged.

3. Manufacturing plants that have been moved into New Jersey from elsewhere, with their names, locations from which they came and where settled.

4. Instances of partial or total suspension of work in manufacturing plants.

5. Manufacturing plants that have been damaged or destroyed by fire or flood, with amount of loss incidental to each occurrence.

6. A list of workmen who were injured while on duty by accidents of a serious character and the number of such cases that resulted in death.

7. A record of strikes and lock-outs, with the occupations in which they occurred; the location, cause, duration and result in each case.

8. A list of the trade and labor unions and organizations of employers formed for trade purposes.

The wide range of information, which constitutes the very life of industrial history, is given for each year in chronological order by counties, and the various subjects included, like all other departments of the annual report, are strictly within the scope of the duties of the bureau as defined by law.

The Monographs on Economic Subjects.

The quality of the bureau's special lines of work, as exemplified in the "Monographs on Economic Topics," and the estimate placed upon their value by competent authority, is shown in some comments on the subject made by Frederick L. Hoffman, Chief Statistician of the Prudential Insurance Company, in the course of an extended criticism of the Vital Statistics of the United States Census of 1900, which was published in book form by the American Statistical Association in 1902. Mr. Hoffman, taking exception to the manner in which the important subject—"diseases of occupations"—is treated, not alone in the census reports, but in practically all American medical publications and reports of State and local health departments, says:

"There are few subjects of greater practical importance before the American public at the present time than the problem of industrial hygiene, and it is a sorry fact that nearly all our knowledge regarding the diseases of occupations is derived from English or Continental sources. The treatment of the subject in American medical works, by American writers, is entirely inadequate, and a painstaking investigation, covering ten years of issue of two leading medical journals, has proven to the writer the almost complete absence of useful contributions by qualified experts to our knowledge of occupation mortality.

"The only creditable exception to the general indifference on the subject is found in the State of New Jersey, where the State Board of Health and the *State Bureau of Labor Statistics* have, at different periods, published exceedingly useful investigations on the mortality of persons in the different important industries of the State.

"What can be done on even a limited scale in this direction is shown by the results of an occupation inquiry made by the State Bureau of Labor Statistics of New Jersey during the year 1901 into the health conditions of men employed in hat manufacture and glass works."

Again, referring to a similar investigation, the results of which were published in the report of 1906, Mr. Hoffman, in a letter on the subject addressed to the bureau, says:

"I have read the special report on the health conditions of the pottery industry with special interest, due to the fact that I have personally thoroughly investigated that occupation, both in Trenton and other localities.

"You are to be congratulated upon the thoroughly scientific and practical manner in which you have dealt with this subject, and the report is in all essentials a model which should be followed by other State bureaus.

"I expect to have an opportunity to call the attention of the public to your report in an address before the American Academy of Political and Social Science, and if possible I shall have the entire report, or at least a large portion of it, reprinted in the Medical Examiner and Practitioner, which pays special attention to diseases of occupation."

Large numbers of communications of an equally commendatory character relating to these monographs were received by the bureau from physicians and persons connected with insurance interests, both at home and abroad; but not alone to professional and business interests have these studies of the diseases and disease tendencies of industry proven valuable; the wage earners in the several occupations considered have found in them a medium through which legislative authority might be invoked for protection against such preventable menaces to health or conditions leading to accidental injury as were brought to light by the investigations.

The "Negro in Manufacturing and Mechanical Industry" was the result of an inquiry intended to show just what progress was being made in the higher ranges of mechanical labor by negroes who, as boys, had taken advantage of the opportunities offered in the manual training departments of our public schools. The monograph on this subject answered the purpose for which

it was designed fully, and its publication was warmly commended by friends and advocates of equal industrial opportunity for the negro race.

The larger special publications issued by the bureau during recent years are: "The Industrial Directory of New Jersey," first published in 1901, and revised and enlarged to double its original size in 1906, and a volume under the title "Industrial Betterment Institutions in New Jersey Manufacturing Establishments," which was published in 1904.

The Industrial Directory.

The first revision of the Industrial Directory, as issued in 1906, is a book of approximately six hundred pages. To explain in the briefest possible terms the purposes for which it was originally published, it may be said that the book was designed to render to the State at large and to its hundreds of small communities the kind of service performed by active and efficient boards of trade for the cities and towns in which such bodies exist. The results have been in the highest degree satisfactory; the Directory seems to have met a wide range of previously existing demands for information concerning the State and its constituent communities that before its publication was practically unobtainable.

The plan on which the Industrial Directory is arranged is to present for every city, town and village in the State having a population of one hundred or more all the facts regarding location, population, railroad and other transportation connections, postal, express and banking facilities, tax rate, fire protection, schools—public and private—churches, libraries and such other social and business advantages of a public or private character as each community has to offer. A list of the manufacturing plants in operation in each community is also given, together with a comprehensive statement showing the concessions offered in each place to induce the settlement of other labor employing industries.

In addition to this wide variety of information which is given with equal particularity for the smallest and the greatest communities in our State, the Industrial Directory contains an alphabetically arranged index, in which the names of every manufacturing firm in New Jersey may be found, with a description of the goods made and the correct factory and office address of each of them.

A few paragraphs quoted from its introductory pages will serve to more fully explain the circumstances that led to the compilation and publication of the Industrial Directory; these are as follows:

"The advantages which New Jersey offers to those seeking locations for manufacturing industry, or opportunities for employment, investment or residence, cannot be too fully set forth or too widely advertised.

"The friendly rivalry existing between the States of the Union is directed toward outstripping each other in the race for population, industry and commerce, which are the elements underlying individual and collective prosperity.

"The importance of having such information prepared in some condensed and at the same time comprehensive form became apparent to the bureau several years ago, when it came to know that a considerable number of manufacturers had, at one or another time, removed their plants to other States in order to obtain facilities that could have been readily secured in many New Jersey municipalities if only there had been some convenient and reliable means of learning where these were and what they had to offer.

"The departure of these plants was a very real and serious loss to the State at large, and our numerous small towns in which a manufactory would be eagerly welcomed as a means of keeping its young people employed at home were deprived of the much-needed opportunities for growth that would surely follow had these departed industries found homes among them instead of being allowed to leave the State without any practical effort having been made to retain them. The want of an official record from which a choice could be made of locations in New Jersey in which equal or superior advantages could be secured for the asking was in all probability responsible for the loss of many of these plants.

"Besides, there had been a number of inquiries addressed to the office from parties outside of the State who desired advice as to where factory sites might be obtained, with full particulars as to transportation facilities, labor supply and other details that could be obtained only by referring the inquirers to such cities or towns as were known to have organized boards of trade.

"The result has been that the growth of populous and prosperous towns was assisted, while comparatively obscure places, although possessing equal or even superior advantages, were passed by unnoticed because necessary knowledge regarding them was, for the time being, unattainable.

"In the larger cities, both of our own and other States, instances are constantly occurring of business expansion outgrowing factory accommodations which, by reason of high land values, cannot be adequately increased without a very great outlay of money. In such cases manufacturers naturally and necessarily seek new locations where land is inexpensive, and erect establishments of greater capacity wherever the inducements offered are most to their advantage.

"Brought face to face with an understanding of this want, and recognizing the importance to the State of having it supplied in the most effective and thorough manner possible, the Bureau of Statistics of Labor and Industry, after much patient labor, collected the necessary material to cover so wide a field, published the first Industrial Directory of New Jersey, which is the first perfect compendium of information relating to all the material interests of the State that has been issued under either public or private auspices.

"The work was undertaken by the Bureau as a patriotic duty to the State at large, and also in a special sense to the comparatively small towns that had not heretofore enjoyed an opportunity of calling the attention of the business world to their many advantages, and although the work has involved a vast amount of labor in addition to the other, and what may be called regular duties of the bureau, it was cheerfully done in the confident belief that the results would redound to the credit and the material welfare of our State."

As before stated, this book proved to be one of the most useful and generally sought after publications ever issued by this

or any other State, and our claim that it has done more to make the resources, advantages and attractions of New Jersey known to all interested in such matters, at home and abroad, than had ever been accomplished before by any other means is amply sustained by evidence in the form of appreciative letters now on file in the bureau.

The directory has been sent to every manufacturing firm in the State, and, with the cordial sanction and approval of the National Department of State, copies of the book were sent to all United States Consuls and Consuls General stationed in foreign countries that have commercial intercourse with the United States, or from which there is any considerable immigration to our shores.

Copies were also sent to a carefully selected list of large manufacturing firms throughout the country, whose works were located in the large cities and who, it seemed, might, through the instrumentality of the directory, become interested in the superior advantages for industrial expansion offered in hundreds of communities here, in which legitimate industry of any kind furnishing employment for labor would be most cordially welcomed. That valuable results have followed seems to be proven by the fact that requests for the book from manufacturing firms outside of the State have been coming to the bureau ever since the first distribution of the volume began, and also that during the year 1906 thirty-seven industrial plants of various dimensions were moved into our State from elsewhere, two-thirds of the number coming from New York, Brooklyn, Buffalo and Philadelphia.

Every post-office in the State, and practically all boards of trade and libraries, with many of the public schools, have been, at their requests, supplied with copies of the directory. Railroad companies, telegraph and telephone companies, express companies, manufacturers, merchants, professional men, and, in fact, representatives of practically every business interest of the State—public, semi-public and private—appear to have found in this many-sided publication something that supplied a previously existing want; the demands for the book have, therefore, been so numerous that if its distribution had not been restricted solely to the purposes of business, an edition three times as large as the one issued would have been required to meet them.

Great as has been the amount of research and labor involved in the production of this book and the other special publications to which reference has been made, the work was performed through extra exertion on the part of the office force, and without any increase whatever in the annual appropriation for the maintenance of the bureau.

A few representative letters selected from hundreds of an equally complimentary character relating to the Industrial Directory that were received from officials, private individuals, firms, corporations and others prominently identified with the business interests of the State and Nation are here appended:

"The copy of the Industrial Directory, prepared under the auspices of your office, both surprises and gratifies me. Unless I am greatly mistaken it will prove to be of very great value to the manufacturing interests of the State.

"It fills a unique position and partakes of the character, which, in a modest way, I sought to give to the publications of the different departments, in that the information contained therein is valuable, and sets forth the peculiar advantages of our State.

"The book is very creditable to your department, and will, no doubt, create a very favorable impression of the good work which is now being done by it."

FOSTER M. VOORHEES,

Ex-Governor of N. J.

"I thank you very much for the copy of the Industrial Directory of New Jersey which you kindly sent me. I should think the work would be of very great value in making known the resources of our State, and it certainly reflects great credit on your department."

W. M. JOHNSON,

Ex-Senator, Bergen Co.

"I want to thank you for the copy of the Industrial Directory of New Jersey which you sent me. It is certainly the most complete compilation I have ever seen, both as to its make-up and the valuable information it contains."

JAMES SMITH, JR.,

Ex- U. S. Senator.

"I have received the copy of the Industrial Directory of New Jersey which you had advised me would be sent. It is a most useful, interesting and instructive compilation to anyone seeking information concerning the wonderful industrial interests within the boundaries of our State."

R. WAYNE PARKER, M. C.

"Please accept my thanks for handsomely bound copy of Industrial Directory of New Jersey. The book will be very useful in my office here (Senate Chamber, Washington, D. C.,) and I appreciate your kindness in sending me a copy."

JOHN KEAN
United States Senator.

"I desire to acknowledge receipt of a copy of the Industrial Directory of New Jersey, and to thank you for furnishing me with so useful and valuable a publication.

"Congratulating you upon the thoroughness and excellence of your work, I remain,

CHARLES N. FOWLER, M. C.,
Chairman Committee on Banking and Currency."

"I beg to acknowledge receipt of copy of the Industrial Directory of New Jersey, and to extend my thanks for your courtesy in sending it. It is a fine publication, and one that will be of great value to me in my work."

HENRY C. ALLEN, M. C.

"I have this morning received the Industrial Directory of New Jersey, for which I thank you very much. It is a very useful book, and I am much pleased to have it."

WILLIAM H. WILEY, M. C.

"Please accept thanks for copy of the Industrial Directory of New Jersey. In the preparation and distribution of this volume you have certainly filled a long felt want. With the unparalleled advantages which New Jersey possesses for the location of industrial plants, it seems strange that heretofore nothing has been done to make them known.

"I hope you have had printed a large edition and will give it wide circulation."

H. I. BUDD,
Commissioner of Public Roads.

"I would be very much pleased to have a copy of the Industrial Directory. It would be of great service to me and aid me in my work in New Jersey, and would be highly appreciated."

J. C. BRITTON, Special Agent,
Department of Commerce and Labor, Washington, D. C.

"Your Industrial Directory of New Jersey is invaluable to our Secretaries in studying conditions which obtain in various cities and towns throughout our State. I hope it will be both agreeable and convenient to you to furnish us with a copy of your latest edition. This addition to our office will be greatly appreciated."

L. E. HAWKINS, State Secretary,
Young Men's Christian Association of New Jersey,
Newark, N. J.

"I am in receipt of copy of the Industrial Directory of New Jersey, 1906, issued by the Bureau of Statistics, and find the same contains information of undoubted value to the business public.

"The industrial index is certainly an excellent feature and reflects great credit for the careful manner in which the work has been compiled."

JAMES M. REILLEY, Secretary,
The Board of Trade, Newark, N. J.

"I am just in receipt of your kind letter of May 31, also a copy of the Industrial Directory of New Jersey, and want to thank you most sincerely for this book, which completely answers our purpose regarding the State of New Jersey; it is just what we most desired for our purpose.

"I want to thank you also for the kind wishes and interest you manifest in the exposition, and have no doubt but that we will take advantage of your kind offer for additional information in the future. I trust the old State of New Jersey will not be in the rear at the coming exposition."

ALGER M. WHEELER, Chief, Dept. of Exhibits,
Jamestown Exposition, Norfolk, Va.

"I am this morning in receipt, through your kindness, of a copy of the Industrial Directory of New Jersey, for which please accept my sincere thanks.

"It is a useful, as well as an instructive work, and should be appreciated by anyone interested in the progress and welfare of our State. Great credit is due you for the production of so fine a work."

R. H. APPLEBY, Manager,
American Assurance Co., Hackensack, N. J.

"Will you kindly forward us a copy of the Industrial Directory of New Jersey. In looking over a copy of this book we find there is a great deal of information contained in the same which would be of advantage to us in our line of business."

T. M. TAYLOR & CO., Agents,
Taylor Insurance Company, Hackensack, N. J.

"Please send me a bound copy of the Industrial Directory of New Jersey, published as I believe, at the expense of the State. The copy I have seen appears to be a very useful and complete book, and well worth the trouble and expense incurred in publishing the same."

WILLIAM W. WELCH,
Counsellor at Law, Paterson, N. J.

"At the suggestion of the Secretary of the Board of Trade of Camden, N. J., I am writing to request that you forward to me a copy of the Industrial Directory of New Jersey for 1906."

HENRY E. REED, Director,
Alaska-Yukon-Pacific Exposition,
Seattle, Washington.

"With thanks acknowledgement is made of receipt of the Industrial Directory of New Jersey for 1906. We wish to congratulate the department on its splendid work, and particularly on this fine book, just issued.

We would be greatly pleased to have the publications of the Bureau, so that easy access may be had to them by our citizens."

BOARD OF TRADE,
Camden, N. J.

"We are in receipt of the Industrial Directory of New Jersey, and desire to express our thanks for the same.

We wish to use the information more for the purpose of helping us to dispose of our products than for the direct purpose you had in view in publishing the work.

We desire, however, to compliment the Bureau on the very complete way in which the subject is treated; the book cannot help but be of great value to anyone interested in New Jersey industries."

R. D. STACKPOLE CO.,
New York, N. Y.

"I am engaged in making some compilations of factory statistics, etc., and am informed by an Indiana State official that you have issued a very valuable report of your State under the title, Industrial Directory of New Jersey. Will you kindly send me a copy. It will be of great service in my work."

EDWARD H. DAVIS, Librarian
National Association of Mfrs.,
Indianapolis, Ind.

"Please send me a copy of Industrial Directory of New Jersey for 1906. I have the edition of 1901, which is in constant use, but saw your new issue to-day and must compliment and congratulate the Bureau on the manner in which it has been gotten up."

CHAS. J. WETZEL,
Newark, N. J.

"I saw recently in a library a copy of the Industrial Directory of New Jersey and it seemed to me about as valuable a publication as the State could send out.

"Will you kindly send me a copy, even if it is not of the latest year's issue. I believe that the National Bureau of the Census could put out nothing of more value to manufacturers than just such a publication."

D. W. STRAYER,
Orford Copper Co.,
Camden Works, Camden, N. J.

"The Industrial Directory of New Jersey arrived this morning and I am very well pleased with it. The book just fills the bill."

MORRIS BROWN, Pres.,
The Manhattan Belt Dressing Co.,
Bridgeport, N. J.

"We wish to thank you heartily for sending us the copy of the Industrial Directory of New Jersey, which was received this morning, and we would appreciate very much your sending us two more copies for the use of officers of our company."

G. T. MORRISON, Manager,
Lamp Works, General Electric Company,
Harrison, N. J.

"You will greatly oblige the Howard-Ramie Fibre Mfg. Co., by sending them at your earliest convenience a copy of the Industrial Directory of New Jersey.

"We are about to locate a mill for the manufacture of vegetable fibre, which will surpass in quality the highest grade of cotton, linen or silk."

H. H. HOWARD,
Howard-Ramie Fibre Mfg. Co.,
New York, N. Y.

"We beg to acknowledge receipt of your book, Industrial Directory of New Jersey, and thank you for the same.

"From a cursory examination of its contents, we must say that the Bureau has produced a very useful volume for the manufacturers and other citizens of New Jersey."

T. P. HOWELL & CO.,
Newark, N. J.

"We are just in receipt of your Industrial Directory of New Jersey, and wish to congratulate you upon its comprehensive scope and apparent great utility.

While for our particular line of business it does not mean so much, still the varied information it contains of our whole State, and the completeness of the work generally, compels our admiration."

J. H. HALSEY & SMITH, Ltd.,
Newark, N. J.

"We have received copy of the Industrial Directory of New Jersey for 1906. It appears to be a very complete and comprehensive record of the industries of our State.

"We desire to congratulate the Bureau on the production of such a fine volume."

MANHATTAN SHIRT CO.,
Paterson, N. J.

"We beg to acknowledge receipt of copy of the Industrial Directory of New Jersey, and thank you for the same. We find the volume will be of material help to us in many ways."

PENNSYLVANIA, BEECH CREEK & EASTERN COAL CO.,
Philadelphia, Pa.

"We had a copy of the Industrial Directory of New Jersey, issued in 1901. It was a very useful book, but has been lost or mislaid and we write to ask if you can send us another of, if possible, a later edition. Also if you have any other publications along the same lines, will you kindly forward copies of the same to us."

THE CLIFFWOOD BRICK CO.,
Cliffwood, N. J.

"The Industrial Directory of New Jersey came to hand this morning, and we appreciate very much your kindness in sending it.

"We are interested both personally and in a business way in the industries of New Jersey, and feel confident your book will prove of great value to us."

CHARLES E. SHOLES COMPANY,
(Chemicals), New York, N. Y.

"We are desirous of securing a copy of the Industrial Directory of New Jersey for 1906. Will you kindly advise what steps we should take to procure this book, as it contains information of great value to us."

PERTH AMBOY FIRE BRICK CO.,
Perth Amboy, N. J.

"We learn that the State of New Jersey publishes a book periodically, giving information in regard to the different cities in your State which are desirable for the location of manufacturing establishments.

"As we are contemplating the selection of a new and permanent location for our business, we would like very much to have any information you might be able to give us, and trust the book referred to (Industrial Directory), may be sent at your earliest convenience."

H. A. DANIEL, President,
Atlas Roofing Co.,
Ithaca, N. Y.

"We are informed that the State of New Jersey has issued an Industrial Directory wherein is set forth such information regarding towns as is likely to be required by capitalists seeking locations for manufacturing plants. Will you not be good enough to send us the latest edition, and we will remit charges, if there be any."

N. W. AYER & SON,
Philadelphia, Pa.

"Thanks for copy of the Industrial Directory of New Jersey. I am contemplating starting a foundry in New Jersey, and, with the assistance of the Directory, have been looking into the merits of several locations.

"Thanking you for your courtesy, and for the information contained in this excellent book, I am,

ROBERT E. CAREY,
New York, N. Y.

As has been already stated, the foregoing letters relating to the Directory are only a small number of the many received in earnest and voluntary commendation of the book as the best medium in existence through which general information relating to the material interests of our State may be obtained. The Directory is, in fact, as nearly as possible, a realization in New Jersey of the plan recommended to the Federal government by the Director of the Census of 1860, in that it gives: "A complete representation of our towns, cities and villages; their institutions of learning, progress in arts and sciences, and their manufacturing, mineral and agricultural products, to the end that all persons interested may see and learn accurately of each place, its people and productions, as could otherwise be seen and learned by the most extended travel and observation."

Industrial Betterment Work.

Under the title, "Industrial Betterment Institutions in New Jersey Manufacturing Establishments," the bureau, in 1904, issued a special report on the movement in factories and workshops of the State popularly known as "welfare work"; this report consisted of a description of certain peculiar features of factory administration and management designed for the physical and financial protection of employes, and for maintaining a spirit of reciprocal confidence and friendliness between employers and employes.

In the compilation of this important work the bureau was largely influenced by a request from the Department of Social Economy of the Louisiana Purchase Exposition that it should be done and that the results of the inquiry, with other work of the bureau along sociological lines, be made a part of the State's exhibit at St. Louis. A few paragraphs quoted from the introduction to the book will serve to explain the purpose it was intended to serve:

"The underlying purpose in the preparation of this work is to show that there is another and a more hopeful and inspiring side of the great labor problem than that which is manifested in strikes, lock-outs, boycotts and other forms of bitter friction between employer and employee.

"It is intended to show that notwithstanding these regrettable incidents the relations between the two great forces of industry—capital and labor—are, at least in New Jersey, on a sound and healthy basis, and that there is no scarcity of instances which go to prove that large numbers of employers and their workmen are, in their business relations, animated by sentiments of genuine friendliness and are loyally co-operating together in carrying out plans for their mutual advantage in the management of industrial enterprises, on the prosperity of which all are equally dependent for success in the struggle of life."

Through the medium of a letter on the subject addressed to the manufacturers of the State, information was received showing the existence of a surprisingly large number of establishments in which employers and employes had long been acting together in carrying out plans tending to make the conditions appertaining to industrial life as safe, pleasant and agreeable as they were capable of being made under the then existing circumstances. This admirable and far-seeing policy of collaboration was shown by the inquiry to have produced a very wide range of concrete results, among them being the establishment in connection with the various works of club houses, reading rooms and libraries, lunch and dining rooms, gymnasiums, amusement halls and bath rooms.

In a large number of other factories the benefit features were found to be in the form of benefit associations for the purpose of providing an income for workmen during sickness or disability, burial funds, accident insurance and workmen's savings funds. This class of benefits was maintained by the joint action of employers and employes, the largest contributions in the majority of cases being made by the former.

Still other welfare work of a character which illustrates the kindness and liberality of employers—the incidental expenses being borne entirely by them—are: Free industrial education, profit-sharing, full pay for holidays and during sickness, prem-

iums for useful suggestions and for specially good work, special rewards for long and faithful services, special consideration for female wage earners, vacations allowed to workmen with full pay, premiums paid on workmen's life and accident insurance policies and family supplies furnished to workmen at cost prices.

Full descriptions of these several classes of benefits, illustrated by fine photographic views of factory club rooms, amusement halls, libraries, lunch rooms, bath rooms, swimming pools, rest rooms, etc., were published in the report, a large number of copies of which were distributed at the St. Louis Exposition, where greatly enlarged reproductions of the illustrations contained in the book formed an important part of the bureau's exhibit in the department of social economy. The exhibit, in its entirety, attracted a great deal of attention during the continuance of the Exposition, and a second edition of the work had to be printed in order to meet the requests for it that began to come in almost immediately after its first appearance from persons interested in progressive factory management in our own and foreign countries.

By far the largest number of these requests came from factory owners and managers of large industrial enterprises, whose interest in the practicability of establishing similar lines of welfare work in establishments under their control had been aroused by the display of what had been accomplished in New Jersey. Practically all of our own large manufacturers were supplied with copies of the book, and there are the best of reasons for believing that it is still exercising a powerful influence for good wherever it has gone.

The International Jury, in the Department of Social Economy, awarded the bureau a *Gold Medal* and *Diploma* for its exhibit at St. Louis.

Substantially the same display was, at the request of the American Institute of Social Service and the Director of the Sociological Departments, sent to the International Exposition at Liege, Belgium, in 1905, and again in 1907 to the International Book and Paper Exposition held in Paris, France, and the Exposition at Jamestown, Va. At Liege and at Paris the Grand Prize, or highest award, was bestowed upon the bureau's work by the International Juries.

A few selected letters written in an appreciative spirit by manufacturers and others in reference to the betterment work publication are here appended:

"On behalf of Mr. Vreeland (Chairman), Mr. Easley (Chairman, Executive Council), and myself, I desire to thank you for copies of your report on Industrial Betterment Institutions, which was certainly issued in very beautiful form. If it is possible, will you kindly send me an additional half dozen copies."

GERTRUDE BEEKS, Secretary,
Welfare Department,
The National Civic Federation, New York, N. Y.

"May I inquire if you have a reserve number of copies of your report on Industrial Betterment Institutions for general distribution. I have already given out four of the six you sent me recently, one having been given to a member of our Welfare Department to send to Australia, where a movement to start this work has just been initiated. He writes that he would like to have a copy himself, and regrets having to part with the one I sent him, for the purpose above mentioned. If you have additional copies which you can spare, we could put them to good use.

"I hope that other State Bureaus will follow the example you have set of investigating this subject."

GERTRUDE BEEKS, Secretary,
Welfare Department, The National Civic Federation.

"As professor of commerce and statistics and due to the fact that I have resided in the city of New York for some three years as Registrar of the Tenement House Department, I am frequently requested to give lectures upon the subject of industrial betterment in the east.

"In this way my attention has been called to the comprehensive report made by you for the Louisiana Purchase Exposition, under the title of 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments.' I not only desire to obtain a copy of that report, but I wish to secure lantern slides from the plates used therein.

"You will therefore greatly oblige me by stating under what conditions I may obtain them. I should perhaps add that the immediate need of such lectures is due to the formation of a Child Labor Committee for this State, whose object is to promote laws for the protection and care of laboring children."

W. R. PATTERSON,
Executive Council of Iowa, Des Moines, Ia.

"It gives me pleasure to hereby acknowledge receipt of and to thank you for the four copies of the volume 'Industrial Betterment Institutions,' which is certainly finely gotten up, and reflects much credit on your Bureau.

"I shall be very glad to receive a number of copies of the second edition; but may I venture to suggest that a full, well crossed index would add greatly to its value as a work of reference. For instance, I would recommend that such subjects as profit sharing, sick benefits, mortuary benefits, baths, restaurants, provident funds, etc., should be so indexed as to enable the student at a glance to find everything in the volume relating to any particular topic.

"A careful reading of the report convinces me that students, editors, and others will make much and valuable use of the book, if it is made convenient for reference."

ARTHUR W. MILBRON,
New York, N. Y.

"I was greatly interested a few days ago while in the Weston Electrical Instrument Co.'s plant at Waverly, in your State, to learn that your Bureau had recently issued a volume in which you had made interesting studies of the welfare features of factories in New Jersey. If you will be good enough to forward a copy of this book to my address, Ballou Hall, Tufts College, Mass., I shall greatly appreciate the favor."

HENRY C. METCALF,
Tufts College, Mass.,
Department of Political Science.

"I found your report regarding Industrial Betterment Institutions in your State of very great value and interest, and I shall be very grateful if you can spare me two additional copies. I want to send one to an English firm that is greatly interested in the work. The other I desire for the service of the Labor Committee of the Boston Twentieth Century Club.

"Your report is the best I have thus far seen, and I trust that it will become a model for other State Bureaus of labor to use in connection with such investigations."

HENRY C. METCALF,
Tufts College, Mass.,
Department of Political Science.

"Many thanks for the bound copy which you have kindly sent us of the 'Industrial Betterment Institutions' report, which will be of great value in our collection of Sociological Literature.

"I should certainly be very glad and greatly obliged, if you will have the name of this Library placed upon your permanent mailing list for future publications, as literature of this kind is always acceptable in a special library like ours."

E. A. BAKER, Borough Librarian,
Metropolitan Borough of Woolwich Public Libraries,
Plumstead, England.

"Your book 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments,' is just received. If it is consistent with your practice, I beg to ask if you will not have the kindness to send copies of this valuable book to the following persons. (Here follows a list of nine names of managers of the various departments of the company's business.)

S. M. DARLING, Secretary,
Socialological Committee, International Harvester Co.,
Chicago, Ill.

(Other letters were subsequently received from Mr. Darling, asking that copies of the book be sent to him for the purpose of meeting requests for it from several large manufacturing institutions in and about Chicago.)

"I have lately been supplied by the American Institute of Social Service with a copy of your excellent report on Industrial Betterment Institutions in New Jersey Manufacturing Establishments. As I am engaged in introducing work of this kind into manufacturing plants, I write to ask if it would be possible to obtain a list of other concerns in your State which have, since the publication of your report, taken up work of this kind, or if there are any others that desire to do so."

H. F. J. PORTER, M. E.
Consulting Engineer, New York, N. Y.

"Will you kindly send me 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments,' which I desire to use in connection with a series of studies on social work in America, which I am now writing.

"I will also be glad to have photographs on the same subject if you have them, which could be used for reproduction."

ERNEST NELSON,
Commissioner of Education for the Argentine Republic.

"I have written to the Commissioner General of the Japanese Commission at St. Louis, that you would very gladly send him some copies of the publication 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments.' I would be very glad to have you do this at your earliest convenience, forwarding the same to his address as indicated in the enclosed letter, together with such additional statements as you may think it advisable to make for the information of his Government.

"It is needless to call your attention to the fact that the Japanese are a very progressive people, who are anxious and ready to adopt modern methods, and it will be well for New Jersey to have a good standing with them.

"I recall with a great deal of satisfaction, that their higher schools of learning were instituted under the direct supervision of New Jersey teachers."

FOSTER M. VOORHEES,
Ex-Governor of New Jersey,
Elizabeth, N. J.

"Please accept my cordial thanks for copy of your admirable volume 'Industrial Betterment Institutions.' You may take a great deal of satisfaction, I think, in the knowledge that you have made a most valuable contribution to the very practical, altruistic sentiment which is so strongly moving our age."

ELIZABETH A. ALLEN, Secretary,
Teacher's Retirement Fund,
Hoboken, N. J.

"We take pleasure in acknowledging receipt of the 'Industrial Betterment' report issued by your office. We note with interest the large distribution of the pamphlet at the St. Louis Exposition, and heartily congratulate the Bureau on being awarded the medals and grand prizes both here and abroad.

"Work of this kind must be attended by far reaching results in the betterment of the welfare of the employed in all parts of the country. In so far as this company is concerned, we hope to bring about many improvements for the comfort and health of our employes at this plant within the next six months.

"In view of the fact that our worthy president, Mr. H. A. Sherwin, is keenly interested in all work of this kind in connection with our own business, as well as his interests in other large institutions that are carrying on similar work, will you kindly send a copy to his address, Cleveland, Ohio, and also a copy to our Vice President and General Manager, Mr. Walter H. Cottingham, at the same place."

H. L. WHITTLESEY, Manager,
Atlantic Coast District,
The Sherwin-William Co., Newark, N. J.

"I am in receipt of your favor accompanying the pamphlet referred to, which I now acknowledge with thanks.

"I congratulate your department upon the work done in this direction, and the results as indicated by the awards. I only regret that the company I represent could not do even more than it has in extending this good work."

H. A. SHERWIN, President,
The Sherwin-Williams Co., Cleveland, Ohio.

"I desire to thank you for the copy of report on 'Industrial Betterment.' The book is certainly very interesting and deserving of wide distribution.

"May I ask you to send copies to three mill owners of Pittsfield, whose names are herewith enclosed."

D. B. RUSHMORE,
Engineer, Designing Dept., Stanley Electric Mfg. Co.,
Pittsfield, Mass.

"Your favor in answer to my request for a larger number of your reports on 'Betterment Institutions' is received, and we thank you for the trouble you have taken.

"Should the State decide to print another edition of the book, we will be very glad to receive the additional copies, and I think the way we will distribute them will accomplish much good."

M. C. LEFFERTS, President,
The Celluloid Co., Newark, N. J.

"We write to thank you for sending us the French translation of the 'Betterment Institutions' work issued by your office, and to congratulate you on the success of your exhibition at Liege, Belgium."

CROCKER-WHEELER CO.,
Ampere, N. J.

"We received your letter, and also copy of the 'Betterment Institutions,' which came under separate cover. We thank you very much for the same. The book is certainly a credit to the State of New Jersey."

C. HOWARD HUNT PEN CO.,
Camden, N. J.

"We beg to acknowledge receipt of your favor, together with the French translation of the 'Betterment Institutions' report. We thank you very much for sending us the book, and we think that your Department deserves great credit for the interest it has taken in the manufacturing industry of the State, and we beg to extend to your our full appreciation of your work."

JULIUS BRANDES MFG. CO.,

Paterson, N. J.

"I beg to acknowledge receipt of your book entitled 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments', which is very interesting to me, and I would like to ask if this company can be supplied with another copy, and if so, kindly have it sent to our Mr. M. M. Duncan, at Ishpenning, Michigan, who is in charge of our mines and mineral department."

WM. D. MATHER, President,

Cleveland-Cliffs Mining Co.,

Cleveland, Ohio.

"We beg to acknowledge, and to express our thanks for the copy of 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments,' published by the Bureau of Statistics of New Jersey. It certainly reflects great credit upon your Bureau, and we, doubtless in common with many others, beg to congratulate you upon its production."

THE CRESCENT SHIPYARD COMPANY,

Elizabethport, N. J.

"Could you send us a copy of your very interesting book entitled 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments,' which Mr. Weber, head of the Bureau of Statistics in the New York State Labor Commissioners office, showed us this morning. We are greatly interested in the whole subject, and hope you may have a copy which you can send us."

F. C. HUYCK & SONS,

Albany, N. Y.

"The Welfare Department of the National Civic Federation has kindly loaned me a copy of 'Industrial Betterment Institutions in New Jersey Manufacturing Establishments.' I have read over this publication with great interest in view of the fact that we are trying to work along similar lines at this colliery. I would like very much to have a copy of this work, and shall be greatly obliged to you if you will kindly send me one."

JAMES B. NEALE, President,

Buck Run Coal Co., Minersville, Pa.

"We acknowledge receipt of 'Industrial Betterment Institutions,' issued by your office, which we note was distributed in large quantities at the St. Louis Exposition.

Your office certainly deserves a great deal of credit from each and every one of the manufacturers for the success achieved in obtaining the highest honors for your exhibit at the Exposition, and also for the effort you must have necessarily put forth in getting out this book.

"Again thanking you for the interest shown our company, as well as to other manufacturers, we are,

PATTON PAINT CO.,
Newark, N. J.

"Please accept our thanks for your letter and the 'Industrial Betterment Institutions.'

"Your work will prove of immense advantage to manufacturers throughout this country, and you are to be congratulated on its comprehensiveness and attractive appearance.

"I should greatly appreciate having a half dozen copies, realizing that although we should like more, your edition is somewhat limited."

CAXTON BROWN,
Weston Electrical Instrument Co.,
Waverly Park, Newark, N. J.

"We have your letter and also copy of the French translation of the 'Industrial Betterment' pamphlet, and wish to thank you for sending the same.

"In congratulating you upon having the Grand Prize for this work, we wish to express our full appreciation of its value, and may say that it gives us great pleasure to see the State of New Jersey properly represented in the great work of social betterment."

WESTON ELECTRICAL INSTRUMENT CO.,
EDWARD WESTON, Secretary,
Waverly Park, Newark, N. J.

"We beg to acknowledge and to thank you for the 'Industrial Betterment Institutions' report issued by your office.

"We congratulate the Bureau on its success abroad, as well as at home, and are satisfied that the State of New Jersey as well as its manufacturers, have a Bureau whose efforts to extend their reputation are worthy of the highest commendation."

J. D. S. VREELAND, Secretary,
Ulster Iron Works, Dover, N. J.

Other letters on the subject of this publication could be quoted in numbers sufficient to fill a moderate sized volume, but the foregoing selections will abundantly answer the purpose of showing how opportunely this interesting narrative was placed before the public, and how well disposed were many of those on whom devolves the responsibility of managing great industrial enterprises to appreciate the value of the lesson and act upon the suggestions which it conveyed.

The value of the bureau's contributions to socialological science was recognized by an award of the *Silver Medal* at the Paris Exposition of 1900, the *Gold Medal* at the St. Louis Exposition of 1903, the *Grand Prize* (highest award) at the Liege Exposition of 1905, and again the *Grand Prize* at the Paris Exposition of 1907.

The very considerable amount of work incidental to the preparation of exhibits for these expositions, and also much greater labor involved in the compilation of the "Industrial Directory," and the "Betterment Institutions," although, strictly speaking, not among the prescribed duties of the bureau, were yet performed by the office force without, at any time, asking for an increase in the moderate appropriation annually provided for the maintenance of the bureau. The actuating motive in this and all other work performed by the bureau has been to encourage and assist the industries of our State, to give the widest possible publicity to the many advantages and opportunities to be found within its borders for every form of legitimate enterprise, to extend the reputations of our manufacturers and workmen and show what they have done and are doing through the medium of intelligent co-operative effort and enlightened factory management toward bringing about permanent relations of harmony between capital and labor.

That in these respects the bureau is justified in regarding its work as having been at least moderately successful can scarcely be disputed after a fair consideration of the facts herein set forth; to these may properly be added in closing the following declaration on the subject of the bureau and its work, which appeared in a recent issue of one of the great metropolitan newspapers, at the conclusion of a series of studies of the growth of New Jersey municipalities. The article, under the caption,

"*Valuable Books on New Jersey's Growth*," was in part as follows:

"The history of New Jersey's industrial growth and development is most compactly told in the Industrial Directory of New Jersey, and the *Twenty-ninth Annual Report of the Bureau of Statistics of Labor and Industries*. From these volumes many facts and figures were obtained which are used in various articles on the State's growth and that of its cities and towns.

"These volumes should be in the hands of every man interested in New Jersey industries and real estate, especially those who are just entering the field of investment that the State offers.

"The bureau is doing a work that will be more and more appreciated as a valuable record, outside of the material benefit that the State will derive from investments made in New Jersey because of the facts and figures so admirably set forth."

The Industrial Depression of 1907-08.

Its Causes, Duration and Results.

The money panic of 1907, which resulted in an extensive and long continued disturbance of business interests, was felt in the financial world for some time before its influence became sufficiently widespread to check the progress of industry and enterprise throughout the entire country. Its first manifestation on a scale large enough to attract general attention appears to have occurred in the latter part of September, when persons of undoubted solvency in the business world who had theretofore experienced no difficulty in securing credit from banks and trust companies, found it impossible to secure the advances necessary for carrying on their business. The banks being the depositories and custodians of practically all the fluid capital of the country must of necessity co-operate with manufacturers and merchants by furnishing the means required for moving enterprises of all kinds. The financial trouble first became manifest in the large transactions of the stock market; some strong and reputable banks in New York were obliged to suspend because of the sudden and extensive fall in the market value of securities which they held, and as a natural and inevitable result a feeling of uneasiness regarding the safety of their money and suspicion as to the solvency of banks in general became widespread among depositors both great and small. "Runs" on several of the leading financial institutions began, and did not terminate until some among them had been obliged to temporarily close their doors. Withdrawals of deposits at once became the order of the day, and as the feeling of distrust extended to all banks, the immense amount of money taken from their custody in this way, having been for the time hoarded, was entirely withdrawn from the channels of business and trade in which it was so much needed. Not being able to see how long the withdrawal movement would last, practically all of the banks were forced to cease making loans

or advances of money even on the most unexceptionable security, feeling obliged to hold all their cash resources in reserve to meet the demands of depositors. Similar conditions prevailed in all the smaller cities and towns of the region for which the metropolis is the financial center. Loans to, and exchanges with the banks in such places practically ceased for the time being, and the same policy was adopted by the country banks, of preparing to meet anticipated withdrawals, by reserving the greater part of their funds for that purpose.

The paralyzing influence of the stoppage of the free flow of money which everywhere ensued brought mercantile and manufacturing industry down to as low a degree of activity as was experienced during the memorable "hard times" of 1873 and 1893. Indeed, the experiences of last year were in some respects more distressing to all classes than the trials experienced during either of the earlier panics. The depression of 1873 came on gradually and was the natural result of the decline in all forms of productive industry which set in a few years after the close of the Civil War. Trade conditions, as they existed at the close of that great struggle, were regulated by a currency far below par value when measured by the gold standard and values of all kinds were correspondingly inflated. The restoration of confidence which followed the triumph of the government brought about a rapid approach to an equality with gold in the value of its legal tender and national bank notes, and a more or less extended period of depression incidental to the necessary adjustment of values to new monetary conditions became inevitable. But the trouble was foreseen, and its approach was gradual enough to permit precautions being taken wherever possible against its most extreme consequences.

Of almost the same character, although not from the same cause, was the depression of 1893, which was really the result of anticipated disturbance of values regarded as likely to follow the triumph of one of the two great political parties that had made radical tariff revision a leading issue in the previous year's Presidential election. The contest ended with a verdict in favor of revision, and there followed, as was expected, an immediate and very extensive reduction in industrial activity while awaiting governmental action in the matter of adopting new schedules;

but in this, as in the depression of 1873, there was ample time to so regulate matters before the tariff changes were actually accomplished as to prevent the commercial and industrial system of the country from falling into confusion. The industrial machinery, although revolving at a speed far below the normal, was still running smoothly and only awaited the passing away of uncertainty and the assurance of a definite tariff policy for the future to resume its old time vigor.

The depression of 1907 differs widely from both its predecessors, in that it originated entirely in the domain of finance, causing first an extreme and widespread unsettlement of stock values, and later a distrust in the solvency of banks which, for reasons already referred to, rendered them for a time incapable of assisting the manufacturers in the customary way, and these in turn, for want of that assistance, were obliged to close up their plants, discharge numbers of employes, or reduce working time, and in some few instances wages also. Over-production and other influences commonly charged with responsibility for such disturbances had nothing whatever to do with bringing it about. Just before its effects were felt, and indeed for three years previous to that time, our factories, mills and workshops were running to their full capacity—many of them working overtime—without being able to satisfy the demand for their goods; but public confidence, which after all is the real sustaining force of business, received a shock from the many revelations of too venturesome financeering—to speak in the most indulgent possible terms—with the deplorable consequence that the existing condition of confidence and activity was displaced by idleness and distrust.

Regarding the depression and the influences that brought it about as a matter of great importance and concern to the public, the Bureau undertook to make a thorough investigation of the subject which would show when the money stringency that caused the trouble was first felt; the number of establishments in which it was found necessary to close entirely or to “lay off” some part of the working force; the conditions of trade just previous to the trouble; the number of contracts already entered into that were cancelled and their money value; the extent to which current or customary orders had fallen off, and the sums paid in premiums for currency to meet pay rolls and other cash obligations.

The inquiry embraced practically every manufacturing establishment in the State, and a schedule of questions arranged to show the manner in which business was affected by the depression was sent to the corporations or firms in control of each plant.

Accompanying the blank was the following letter :

"The Bureau is desirous of obtaining from first hand the data and information required for the compilation of a special report showing how far the money stringency which prevailed during the later months of the year 1907, and still continues, although with modified intensity, up to the present time (April 3d), has affected the employment of labor and the volume of production in the manufacturing industries of New Jersey. A thorough investigation of the subject, such as can be made only by and with the earnest concurrence and cooperation of the manufacturers, will, we believe, produce results of value not alone to business men, but also to the entire population of the State, of which approximately 270,000 persons, or 13 per cent. of the total are dependent for their maintenance on wages earned through some form of manufacturing industry."

"More than \$130,000,000 was paid in wages to this vast industrial army during the year 1906, and the products of the mills, factories and workshops in which they are employed amounted for the same period to a grand total of \$775,000,000. In view of their magnitude, everything that tends to disturb or impair these great interests, by checking even temporarily the steady expansion of industry which our State has hitherto enjoyed, naturally produces a widespread desire for information as to the character, causes, and consequences of such interruption. Rumor, based largely on newspaper reports, represents the money stringency as having caused a very serious disarrangement of manufacturing activity throughout our State, with, in many instances, incidental cancellation of orders, followed necessarily by the discharge of large numbers of employes or reduction of working time for the purpose of bringing about at least a partial adjustment of production, to the great shrinkage in demand."

"To what extent the adoption of these extraordinary measures became necessary can only be determined by obtaining precise statements on the subject from the manufacturers themselves. You are therefore requested to fill out the indorsed blank, and return the same to this office at your earliest convenience."

Respectfully yours,

BUREAU OF STATISTICS OF LABOR AND INDUSTRIES OF NEW JERSEY,

W. C. GARRISON, *Chief.*

Of the twenty-two hundred (2,200) corporations and firms to whom copies of the foregoing letter were addressed, eleven hundred and fourteen (1,114), or more than one-half the total number, showed their interest in the inquiry, and the results sought

to be obtained by promptly returning the blanks filled out for the most part with all details asked for. Several hundred others were received, the contents of which were so meagre as to preclude their use.

The 1,114 reports are classified under 59 industry headings, and the facts and figures as shown by the inquiry are presented in a series of four tables which form part of this presentation; a brief summary of the same shows the following results:

FOR THE STATE.

Number of general industries in the classification.....	59
Number of establishments reporting.....	1,114
Aggregate number of persons ordinarily employed in these establishments	168,871
Months during which the depression appeared in the largest number of establishments	October and November.
Total number of wage-earners discharged in consequence of the depression	40,181
Proportion of wage-earners so discharged—per cent.....	23.7
Average proportion of falling off in orders—per cent.....	35.5
Number of contracts cancelled because of the depression.....	8,630
Amount of money involved in such contracts.....	\$8,504,424
Number of establishments reporting having paid premiums for currency	26
Highest premium paid—per cent.....	8.0
Lowest premium paid—per cent.....	1.0
Average premium paid—per cent.....	3.2
Number of establishments reporting a discharge of employes.....	642
Average number of wage-earners discharged per establishment.....	62.6
Number of establishments reporting reduction in working time, but no discharge or lay off of wage-earners.....	290
Range of reduction in daily working time.....	from 2 to 5 hours.
Number of establishments reporting neither discharge of wage-earners, nor reduction in working time.....	182
Number of establishments reporting trade conditions before the depression as "good".....	927
Number reporting trade conditions as "fair".....	133
Number reporting trade conditions as "bad".....	20
Number who made no report on trade conditions.....	34
Falling off in orders following the depression—highest percentage reported	100
Lowest percentage reported.....	1.0
Average percentage reported.....	34.8

The above summary shows the effects produced by the industrial depression, or the money stringency, within the limits to which it seemed best to confine the inquiry. Although its influence was felt in by far the larger number of establishments during the months of October and November, there were still a number that succumbed to it at an earlier and others at a later

date. During the month of September four out of nine establishments engaged in "metal refining" found it necessary to discharge 472 men, or a little more than 11 per cent. of the 4,218 men employed in the industry as represented by these plants; in December 12 establishments out of 20 engaged in the construction of "carriages, wagons and trucks," and employing 1,531 men, reported the discharge of 905, or 59.1 per cent. of that number. The industries averaging the smallest number of wage-earners appear from the reports to have succumbed to the trouble first, and also to have been most severely affected by it; the larger establishments, particularly those under the corporate form of management, having as a rule an ampler supply of reserve funds, were able, notwithstanding the cancellation or holding up of contracts and the falling off or practical stoppage of all orders, to continue running full-handed, although on reduced working hours, for a much longer time or until the manifest passing of the financial storm had partly restored confidence; but few among even these more substantial firms found themselves able to continue storing up products for which there was no immediate demand without first reducing working hours from 25 to 50 per cent.

Of the 1,114 establishments reporting, 472, or practically 42 per cent. of the total number, retained all their ordinary working force but were operated on reduced time, as stated above; while 642 establishments, or 58 per cent. of the total number, found it in most instances impossible to meet the situation in any other way than by employing those still retained on short time.

In the following table the 642 establishments reporting reductions in the number of wage-earners are classified according to the percentage of employes discharged:

Under 10 per cent. discharged by	26 establishments.
10 but under 20 per cent. discharged by	94 establishments.
20 but under 30 per cent. discharged by	117 establishments.
30 but under 40 per cent. discharged by	105 establishments.
40 but under 50 per cent. discharged by	68 establishments.
50 but under 60 per cent. discharged by	114 establishments.
60 but under 70 per cent. discharged by	53 establishments.
70 but under 80 per cent. discharged by	23 establishments.
80 but under 90 per cent. discharged by	22 establishments.
90 but under 100 per cent. discharged by	8 establishments.
100 per cent., or all employes discharged by	12 establishments.

Table No. 1 presents by industries the number of establishments reporting; the aggregate number of wage-earners employed before the depression; the number of establishments reporting the discharge of employes, and the number and equivalent percentage of persons discharged. An examination of the figures which appear on the table will show that of the industries considered those that suffered most severely were: The manufacture of "railway equipments," which reported the lay-off of 77.7 per cent. of its regular working force; the manufacture of "carriages, wagons and trucks," 59.1 per cent.; "stone crushing," 48.0 per cent.; "machinery," general and special, 44.7 per cent.; "iron and brass foundry," 40.3 per cent., and "lumber mill work," 41.9 per cent.

The metal trades will be seen to have suffered most, and the textile industries, with some few exceptions, least. Out of a total of 168,871 wage-earners, 40,181, or 23.8 per cent., lost their employment some time during the months of October or November, and only a few of these had returned to work as late as April, when the reports on which this presentation is based were received.

Table No. 2 shows the conditions and prospects reported as prevailing in each industry just before the depression became manifest, and also the percentage of falling off in the customary volume of orders which ensued immediately thereafter. The total number of establishments reporting on this phase of the subject was 1,080; of these 927, or 85.8 per cent., reported business "good," and their plants working up to substantially full capacity; 133, or 12.3 per cent., reported conditions "fair," and 20, or 1.9 per cent., reported them as unsatisfactory or "bad." Only 16 out of the 59 general industries report unsatisfactory conditions of trade before the depression began; "leather manufacture" reports 2 establishments "bad" out of 46; "cotton goods" reports 2 out of 34, and "worsted and woolen goods" reports 2 out of 20. The other 14 are divided among that many industries, on a ratio of one to each of them; that is to say, out of 89 establishments engaged in the silk industry only one was reported as not doing a perfectly satisfactory business before the advent of the depression, and one foundry out of 56 reports itself as similarly situated. This table also shows the highest, lowest and average percentage of falling off in orders, the figures re-

lating to which are given by averages for each of the 59 industries and for all industries. These percentages are classified in the following table for the 871 establishments that reported these details:

12 establishments report.....	under 10 per cent.
56 establishments report 10 but under	20 per cent.
116 establishments report 20 but under	30 per cent.
89 establishments report 30 but under	40 per cent.
75 establishments report 40 but under	50 per cent.
249 establishments report 50 but under	60 per cent.
82 establishments report 60 but under	70 per cent.
103 establishments report 70 but under	80 per cent.
30 establishments report 80 but under	90 per cent.
27 establishments report 90 but under	100 per cent.
32 establishments report 100	per cent.

The highest percentages of shrinkage in orders are found in the metal trades, and the lowest among "food products," "chemicals" and certain branches of the textile industries. The demand for "machinery," general and special, fell off 53 per cent.; for "jewelry," 51 per cent.; iron and brass "foundry products," 49 per cent., and "rubber—hard and soft," 51 per cent. The demand for "brewery products" fell off only 3 per cent., while "food products" show a decline of 10 per cent. The average falling off for all the industries reporting is 34.8 per cent.

Table No. 3 shows the number and aggregate value of contracts cancelled that had been entered into before the depression. These numbered, as reported, 169, involving an aggregate total of \$8,504,424, or an average of \$50,322 per establishment. The number of firms or corporations that were obliged to pay a premium for currency with which to meet pay rolls of wage earners is shown by this table to have been only 26, although newspaper reports and public rumor, when the money stringency was most intense, would justify the belief that a majority of our manufacturers could meet accruing obligations only by submitting to unreasonable demands on the part of money changers. The highest premium paid was 8 per cent.; the lowest 1 per cent., and the averages for all 3.2 per cent.

The fourth and last table of the series presents the data contained in Tables Nos. 1, 2 and 3, by counties, the purpose in view being to show which part of the State was most severely affected by the depression.

As shown by the figures on this table, Atlantic county suffered least in the matter of employment of wage-earners, there having been only four men discharged out of 1,136 reported as at work in nine establishments, although the number of orders or contracts had fallen during the depression 33.3 per cent. below the normal of ordinary times, and 24 contracts amounting in value to \$15,500 had been arbitrarily cancelled. The next most fortunate county was Bergen, which shows 9.8 per cent. of idleness, and contracts to the value of \$38,140 cancelled. Camden was also comparatively favored, having 15.4 per cent. of idleness, and \$242,660 of cancelled contracts. Essex reports 38,485 wage-earners, of whom 7,506, or 19.5 per cent., were discharged during the depression, and for the same time contracts for products aggregating \$2,357,746 were cancelled. Apparently Warren and Union counties suffered most severely from unemployment, the proportion of their ordinary working force thrown into idleness during the months of October and November being 56.7, and 45.7 per cent. respectively. These percentages of idleness are far above that shown by any other part of the State, the next highest being 36.7, 35.8 and 35.6 per cent. respectively for Bergen, Hunterdon and Cape May counties.

During the same months orders for factory and workshop products fell below the normal demand—51.9 per cent. in Hunterdon; 47.9 per cent. in Morris; 47.0 per cent. in Salem; 44.3 per cent. in Morris; 44.3 per cent. in Warren; 42.6 per cent. in Mercer, and 40.1 per cent. in Passaic. The other counties show a falling off ranging between 39.6 per cent. for Essex and 22.1 per cent. for Gloucester.

Naturally, considering their greater importance as industrial centers, the manufacturers of Essex, Passaic and Hudson suffered by far the greatest amount of loss from "held up" or cancelled contracts; as shown by the table, there are 2,992 such withdrawals reported for Essex, aggregating in value, \$2,357,746; for Hudson, 2,696, representing \$1,790,560, and for Passaic, 1,390, worth \$2,301,800. These three counties report 82.1 per cent. of the cancelled contracts, and 75.8 per cent. of their total value. Salem alone among the counties reports no contracts cancelled as a result of the depression.

Accepting the proposition that the enforced idleness of wage-earners is the most simple and satisfactory standard by which the effects of the depression in the different counties of the State can be measured, and with a view to estimating its influence on the general prosperity of each locality, the following table, in which the counties are arranged according to the percentage of idleness, beginning with the lowest, is presented:

County.	Proportion of Wage Workers Discharged.
Atlantic	0.3 per cent.
Bergen	9.8 " "
Salem	12.3 " "
Camden	15.4 " "
Monmouth	16.4 " "
Morris	17.7 " "
Cumberland	18.1 " "
Hudson	19.3 " "
Essex	19.5 " "
Sussex	22.4 " "
Middlesex	22.5 " "
Passaic	24.2 " "
Somerset	27.7 " "
Mercer	29.5 " "
Gloucester	29.8 " "
Cape May	33.6 " "
Hunterdon	35.8 " "
Burlington	36.7 " "
Union	45.7 " "
Warren	56.7 " "

Although much was said during the first months of the depression about the scarcity of currency and the great difficulty experienced by employers in procuring a supply to meet pay rolls and other demands for cash, it has been proven by the inquiry that manufacturing industry experienced practically no inconvenience on that account. Fully 75 per cent. of the manufacturing industries of the State are included in this compilation, and yet among the 1,114 firms and corporations reporting there were only 26 who state that on one or more occasions they could secure ready cash only by buying it like other commodities. No doubt the quantity of currency at the banks was greatly diminished by the withdrawals of timid depositors, but nevertheless the supply seems to have been substantially equal to the demand in cases where credit was good.

Nothing has been said on the question of how wages, that is, actual wage rates, were affected by the scarcity of employment which followed the depression; the reason for this is the very gratifying circumstance—greatly to the credit of New Jersey employers—that not one among them is shown by the records of the inquiry to have taken advantage of the situation, which they could easily have done, for the purpose of reducing wages. Had they been disposed to do so the workmen concerned could, under the circumstances, have made little if any effective resistance, there being for the time at least three men for every two jobs. Employers were certainly not deterred by fear of organized opposition, as labor unions exist in only a comparatively small number of factory industries; their equitable and manly course in not taking advantage of an opportunity they are often times unjustly represented as ever ready to grasp constitutes a claim for respect and gratitude such as the workmen concerned are not hereafter likely to ignore.

An exceedingly interesting phase of the inquiry and one that should afford much material for serious thought is the selection of opinions expressed by employers on the causes that brought about almost a general collapse of our monetary system at a time when business of all kinds appeared to be on a basis of the most enduring and unsurpassable activity. There are nearly one thousand of these letters, some consisting of a few clear and expressive paragraphs, others more extended, and a number that, in breadth of view and argumentative power, may fairly be classed as essays of a kind that the best publications devoted to economic science might welcome to their columns.

As shown by a perusal of these communications, the judgment of the largest number appears to be that the money stringency is the direct and inevitable outcome of the gambling spirit among our people which diverted the banking capital of the country from legitimate business enterprises to the support of all kinds of speculative schemes promising large and quick returns, which in a majority of cases were mere traps designed to exploit the ignorant and avaricious investor. Others believe the trouble to have been caused by the immense expanse of industry that has taken place during the past ten years, supported by a currency entirely insufficient in volume to keep it moving smoothly; still

others attribute the confusion and loss of confidence to the disorganization which the work of labor organization has produced in many important lines of industry, and a considerable number express the opinion, in more or less emphatic terms, that the money stringency and resultant industrial depression are the direct and premeditated consequences of a conspiracy of great capitalists, who, by the withdrawal of money from the ordinary channels of business, sought to bring about a condition of industrial stagnation in order to influence public sentiment against certain governmental policies alleged to be opposed to their interests.

Want of space forbids the reproduction of all these letters, but the selection which follows has been made with a view to exhibiting every shade of reasonable opinion expressed by manufacturers on this momentous question, avoiding at the same time the tedious and profitless reiteration which would follow if all communications expressing substantially the same views were included. A not altogether successful effort has been made to establish a classification of these letters on the lines which would bring about a grouping together of all similar opinions regarding the cause of the depression, with a view to showing the numerical support behind each theory, but the fact that so many of them assign several reasons for the trouble renders an exact classification of that character practically impossible. The letters are therefore arranged under headings which indicate as nearly as possible the leading idea as to responsibility entertained by each writer.

Although, as a matter of course, approval or disapproval of the views advanced in these letters is neither implied nor intended by their inclusion in this report, still the fact of their being the deliberate utterances of men thoroughly acquainted with the intricate machinery of business and versed in the knowledge requisite for the management of large enterprises in which workmen are employed by hundreds and thousands, should, and doubtless will command for them an unusual degree of respectful public attention.

Statements from Manufacturers of New Jersey, Giving Their Views on the Causes of the Industrial Depression of 1907-08.

Improper Banking Methods.

1. A MANUFACTURER OF UNDERWEAR:—"We are of the opinion that the panic was caused by a few 'frenzied' financiers of a type that has become notorious, who were permitted to use the funds of banks controlled by them for purposes that could hardly be regarded as legitimate, to say the least. A large share of responsibility rests on the insufficient laws governing the operations of trust companies. The country would be all right if wealthy lawbreakers, when detected, were sent to prison, and not punished merely by fine."

2. MANUFACTURER OF WORSTED YARNS, ETC.:—"The exposure of unsafe banking on the part of a small group of banking interests, as well as the natural results of the investigations of the last few years, has made capital afraid of the various forms of investment, and has shaken public confidence generally."

3. REFINERS OF CRUDE PETROLEUM:—"Abuse of confidence by officers of life insurance companies. Wild cat enterprises and railroad juggling, with lack or non-execution of laws to punish rich criminals by imprisonment, is at the bottom of much, if not all, the trouble."

4. RECORDING INSTRUMENTS:—"Our business is about 25 per cent. of what it should be. To what extent the falling off is due to the so-called money stringency of last fall we are unable to say; neither are we prepared to say to what extent the present condition of trade generally may be due to artificial manipulation of prosperity in the vicinity of Wall Street. We are of the opinion, however, that underlying the whole business structure are grave faults and unsound practices which should be corrected by well considered and effective legislation. We also believe that revision of import duties would be beneficial and possible without lowering the standard of American wages."

5. PIANO CASES:—"I think it was caused by the practice of 'high financiering' or 'flim-flam' in some of the large New York banks. The money was used for selfish purposes and not to assist honest business enterprise. Manufacturers could not get their paper discounted on any terms and could not therefore meet their obligations. Many were encouraged by

the long continued good times to do business greatly in excess of their invested capital, and with the accommodations customarily extended by the banks, were able to meet all obligations as they accrued. The recent money stringency changed all this, and business concerns are cutting down operations to the proportion of their actual capital. Probably 90 per cent. of the business houses are perfectly sound, and matters will resume their old course with the restoration of confidence."

6. BOAT BUILDING:—"Bankers were primarily at the bottom of the scare. 'Scared bankers' did more to hurt business by withdrawing credit, refusing to discount notes, calling in loans, etc., than all other causes combined. There are no greater cowards in the business world than the bankers; many think that business depends upon them, but in truth it is they that are dependent upon business."

7. FOUNDRY AND MACHINERY:—"The causes that led up to the present financial depression were too diverse to be fully covered in a form that would suit your purpose; but we would say that some of them were as follows:

"1st. The unsettling of public confidence in the security and stability of the great life insurance companies, together with a doubt as to the probity of their managers, as developed by the Hughes investigation. The disclosures of questionable conduct of certain men high in public esteem in connection with these companies. The fear that money invested in them in the form of endowments and straight life policies might be lost.

"2d. The disclosures with regard to the manipulation of railroad stocks and bonds by Wall Street operators, showing the control of enormous investments by single persons, and the dishonest methods followed in the purchase and sale of the same.

"3d. The vigorous action of the national government to punish these manipulators, and to prevent and punish the giving and receiving of rebates, whereby certain shippers were placed in more favorable circumstances than others, thus giving them a monopoly of their respective businesses.

"4th. The growth of governmental ownership, municipal ownership and other socialistic sentiments, due to popular dissatisfaction with present conditions, as exposed by these investigations and reported in the newspapers.

"5th. The feeling on the part of organized labor that it is not sufficiently remunerated for its services; and on the part of capital, that labor has attained an unduly commanding position from which it should be displaced.

"6th. The hesitancy of manufacturers and others to engage in new construction although thousands are without employment, in the expectation that wages and raw material may reach a lower level."

8. FINE MECHANICAL INSTRUMENTS:—"Too much 'high finance'; bad currency laws; inadequate bank protection, practically allowing banks to loan to their own officers without proper security. General chicanery and

disturbing of business confidence in consequence. Over capitalization (water) making dividends impossible except under extremely favorable business earnings, and consequent falling off of stock values."

9. MEDICAL AND SURGICAL SPECIALTIES:—"Industrial and financial economists will charge the panic to the greed of the plutocratic forces in our commercial and banking interests that dictated inflated values and placed American securities on a fictitious basis—securing in very large measure through their agents the deposits of our savings banks and fiduciary institutions in order to aid them in their speculative movements. The action of these combined forces reduced legitimate business to a condition of helplessness."

10. STEAM ENGINES:—"In our opinion there were three leading causes for the panic and depression of trade during the latter part of 1907 and the first quarter of 1908.

"1st. The natural shrinkage of business which precedes a presidential election, due to uncertainty as to the tariff and financial policy of the incoming administration.

"2d. Destruction of confidence throughout the country due to the existence and revelation of extensive corporate and financial dishonesty in our banking and other institutions.

"3d. The persistent exploitation of these conditions and a policy of 'calamity howling' by the public press during the year 1907, has aggravated and prolonged the depression and panic far beyond its natural limits."

11. IVORY BUTTONS:—"In our opinion the trouble was started by the closing of the Knickerbocker Trust Co., in New York, which showed the people of the United States how much confidence they can have in the present banking system, when a comparatively few men can control all, or at least a considerable part of our banking institutions. The establishment of a central bank controlled by the Federal government would prevent any future panic such as the one we are just passing through."

12. CHEMICALS, PAINTS, ETC.:—"In our opinion this money stringency was caused by the exposure of unsafe banking conditions and consequent loss of confidence on the part of small firms and individuals who withdrew their balances and hoarded them. This was particularly noticeable to us in the shrinkage of business done with our smaller customers, and our inability to collect small balances due us on old business. Our experience now is that buyers are pursuing a 'hand to mouth' policy, apparently not having the confidence to purchase for stock."

13. PAPER:—"The money stringency was not caused by farmers' short crops or low prices. Neither was it caused by manufacturers or dealers in merchandise. None of these interests made unusual calls upon the banks. The responsible parties are the trust companies and the banks, who by making

large loans to speculative schemes exhausted the money that should have been held subject to the customary demands of sane business."

14. **BUILDING BRICK:**—"The money stringency was the result of bad banking practices by a number of the large banks and trust companies of New York City. The exposure of their methods caused a widespread loss of confidence in banks generally, which as a matter of course resulted in the withdrawal of deposits and the hoarding of the money thus suddenly diverted from the support of business at a time when by reason of the great activity in all lines of industry the non-availability of these funds was most severely felt. Owing to the non-elastic character of our currency laws the deficiency of funds thus brought about could not be remedied. Manufacturers and business men were therefore compelled to reduce production and limit operations according to the means at their disposal."

15. **"WOOD WORKING MACHINERY:**—"We have believed all along that the main cause of the trouble was the financial rottenness and dishonesty of some of the large banks and trust companies in New York City, and after this the unbusinesslike and unnecessary hoarding of money by these banks and others throughout the country, making it impossible for the manufacturers and business men—the actual producers of wealth—to obtain money to carry on their business, hence they had to give up trying for the time being. Our business fell off to almost nothing and has continued poor up to the present time (April).

"We believe finally that the banks and financial institutions brought on the panic, and their unreasonable methods have continued it. It is purely a question of money; every other condition in the country is as good as before the panic. The banks did more to scare the people than all other causes."

16. **CONDENSERS.**—"It is a very difficult matter for anyone to determine the causes of the excessive industrial depression. It would appear:

"1st, that some reaction was to be expected as a natural sequence to the wonderful prosperity that this country was enjoying. 2d, the enormous expenditures brought about by the Boer and the Russo-Japanese wars forecast a shortage of cash. 3d, the recklessness displayed by promoters and even some supposedly reputable concerns in inflating securities, coupled with the lack of confidence in Wall Street displayed by the public as a result of disclosures, brought about a feeling of unrest with respect to all investments.

"The Morse, Heinze and Thomas bank revelations crystallized public opinion into such a firm belief that a financial crisis was imminent, that only a suggestion was required to precipitate a run on any bank at which the finger of suspicion was directed. At this point it is apparent that actual fear and excitement influenced the minds of officials of some banks and other concerns to such an extent that the panic was much more far reaching than was necessary. While due credit should be given to those banks that deserve it, the substantial manufacturing and business concerns should

also receive their due meed of praise; for it was the conservative handling of the situation by the manufacturers and business concerns with a view to helping each other that more than anything else relieved the strain and prevented widespread ruin. Too much stress cannot be laid upon this effort on the part of the concerns mentioned to lend assistance to one another by accepting notes, certificates of deposit, etc., and granting extensions under unusual circumstances.

"We give no credit whatever to the charges made by some that on the one hand the panic was precipitated by Wall Street interests with a view to discrediting the administration, and on the other that the so-called 'Roosevelt policies' were instrumental in creating a feeling of unrest. If the President's 'policies' served to reveal the conditions existing in some banking circles, it is far better for the country that remedial steps were taken during times of prosperity than to have permitted the evil to exist until the country should be less able to undergo a treatment."

17. DOORS, SASH AND HOUSE TRIM:—"In our experience the banks have made and are making the major portion of the trouble and delay in the restoration of confidence. There has been since the first of the year a constant effort on the part of builders to go on with new work in this vicinity, but the attitude of the banks makes it impossible, as they refuse to make any loans whatever on real estate. We have personally known of many applications to the local banks for loans on a basis of 50 per cent. of the valuation in perfectly legitimate building operations, but in all cases applicants were told that the banks were making no loans on real estate security. Had builders been accommodated on the old basis of two-thirds, or even one-half valuation, there would be more business than a year ago."

18. STEAM AND HOT WATER PACKING:—"We think a small percentage of the public were alarmed at the result of operations on the part of some light-brained stock jobbers, and the bankers—many of them—behaved like a lot of school boys. They were in a position to aid every legitimate business concern in temporary need had they felt disposed, without jeopardizing their own interests or safety in the least."

19. SHEET METAL KITCHEN WARE:—"We think the long continued rush of business naturally tapered off some, but the *actual cause* of the trouble, in our view, was the action of certain bold and unscrupulous New York financiers whose illegal performances, extending through a number of banks and trust companies, brought them up with a round turn. For commendable contrast with such practices, look at the record of New Jersey banks during the same period. Not one of them was involved in trouble, except as each had to suffer with the general public. No calling of loans but established on a firm basis, eschewing all speculations, they held their own and maintained an unwavering confidence among all classes. 'Honesty is the best policy' after all."

20. STEEL NOVELTIES:—"Banks refusing to renew notes for reasonable time; insisting upon thirty days, and cash reduction each time due, and at the same time refusing to give credit for checks until after collection. Lack of confidence between banks and their eagerness to fortify against possible loss to themselves."

21. IRON FOUNDRY:—"In our opinion the most serious cause of the panic and business depression was the curtailment of credit among business men. One year ago we had no difficulty in obtaining all the raw material required, such as pig iron, cork, etc., on sixty or ninety days credit—the same as we extended to our customers—but since May, 1907, we have been practically forced in many instances to pay cash for these supplies. This forced us to demand prompter settlements on the part of our customers, which lost us some trade. When the panic became acute, in October, the refusal of the banks to discount notes still further crippled business men and manufacturers, forcing many to close up that could and would have kept going if credit could be obtained from the banks."

22. STEAM BOILERS:—"In our opinion the financial trouble was due to the general inflation of values throughout the country, bad banking methods and the attitude of the administration. With the latter, however, we are in full sympathy."

23. WIRE NOVELTIES:—"My opinion is that the trouble was caused by inadequate banking facilities and governmental exposure of unlawful or illegal dealings on the part of railroads and other corporations and the retaliatory measures of capitalists. By inadequate banking facilities I mean that we should have a 'Government Bank' to come to the assistance of our National Banks when occasion requires. The government should stop issuing *unlawful money*. The writer was in Europe during the months of October and November, 1907, and could pass gold bills without trouble at their face value, while silver certificates and legal tender notes would only be accepted at a discount."

24. GLASS:—"We have been manufacturing glass for twenty-eight years, but never in the history of our business was the outlook for a prosperous year so promising as during the months of July, August and September of last year. We were unable to fill our orders promptly and were running our plants to their full capacity up to the first of October, when we began to feel the effects of the panic in that our customers did not order their goods shipped forward, and our shipments fell off in the neighborhood of forty per cent. In the meantime we kept our factories running on actual orders in hand, believing that conditions would change by the first of the new year and business resume its normal conditions. On account of inability to procure sufficient funds to pile up stock we were obliged to curtail production from time to time until at present (April) we are not running much more than half our productive capacity."

"As to the cause or causes of the financial trouble, we are frank to admit that we can give no definite theory that would be absolutely correct. Some financiers blame the President for our financial troubles; we agree with them to only to a very limited extent. We believe the panic to be a 'gambler's panic,' which originated among the 'frenzied financiers' of New York. The 'pyramid banks' (or bankers) used the funds of depositors, which were diverted from legitimate purposes, for the purpose of speculating in stocks in a desperate attempt to inflate their values and unload upon the public. When the bubble burst the 'pyramid' banks tumbled and in their fall brought financial institutions ordinarily safe down with them.

"There has been no material reduction in prices of manufactured goods or of the necessities of life; there is no surplus of manufactured goods forcing themselves upon the market. The only things of value or supposed value that have shrunk greatly are the stocks and bonds which have been handled by the gamblers and banks almost exclusively. One of the results of the panic is the sifting out of the banks or bankers who were doing business illegitimately. The solvent banks felt the necessity of pursuing an ultra-conservative policy, increasing their reserves far above the legal limit, necessitating the calling in of loans made to manufacturers and merchants who depend upon the banks to carry them during the dull period of December, January, February and March, when goods are being manufactured for their spring trade. The manufacturers, being unable to secure the funds ordinarily obtainable, are obliged to curtail production and lay off from thirty to fifty per cent. of their help, which, of course, decreases the ability of the laborers to purchase, and naturally lessens the demand for goods of all kinds that would have gone into consumption; but we are so absolutely interdependent that an injury cannot be inflicted upon one branch of industry without affecting all. These laborers, being thrown out of employment, are obliged to secure credit, and when business again resumes its normal condition they will be under the necessity of economizing and limiting their purchases to the bare necessities of life until their debts are paid. In view of these facts, we are not anticipating a demand for our products equal to that of last year, and have no doubt there will be a shrinkage of from thirty to forty per cent. until conditions get back to their normal state. The panic certainly came upon us like a 'thunderclap out of a cloudless sky.' We knew we were doing business at breakneck speed, but at the same time the demand for merchandise and labor was far in excess of the supply. We did not believe it possible that a financial crisis could overtake us while in that position, as there was no surplus of merchandise in any industry; nor is there much, if any, surplus to-day, as the money stringency has compelled practically every manufacturer to reduce his output to the actual requirements of his trade."

Reckless Speculation and Dishonest Practices.

25. CLAY AND SAND MINING:—"For the past five years the entire country has been very prosperous, and as a natural result the average man, considering the prosperity a wellspring of everlasting income, began spend-

ing or investing all profits without knowledge or caution. This in itself would not have brought on a severe crisis; but not satisfied with spending earned profits, individuals and corporations began spending those that at best were only in prospect, borrowing money in volume greater than the increase of wealth of the whole country, until no more could be had. We then went abroad and borrowed all that foreign money men would lend, and in the regular course reached the end early in 1907. However, as the trouble was progressive, some six or seven months gradual tightening of the lines was required to bring on the crisis. The readjustment now under way with incidental restriction of expenditures for new work and extravagant living should continue until really earned profits have paid back a reasonable proportion of the extraordinary loans. Perhaps the attitude of the administration toward certain corporations brought on the financial panic a year in advance of the time when it would otherwise have occurred, but as its coming was inevitable, each day's delay would only add to the greatness of the calamity, leaving when the crisis arrived a far more difficult state of things to deal with than that which we have now."

26. HANDKERCHIEFS AND EMBROIDERIES:—"I believe that too much recklessness or lack of conservative foresight and prudence was the cause of the panic. When trust companies and banks, overladen with securities of doubtful value, were forced to suspend, practically all banks curtailed their loans, and manufacturers or merchants doing business extensively on borrowed money were compelled to suspend operations, thereby throwing out of work vast numbers of employes, the stoppage of whose earnings caused a general stagnation in all kinds of business."

27. LIME:—"The causes of our financial troubles are in my judgment traceable back to speculation and reckless expansion encouraged by certain banks and trust companies. Surplus funds were sent by country banks to New York, with full knowledge that the aggregate of these sum was being loaned out to speculators for the purpose of promoting enterprises of more or less doubtful character. Accommodations to legitimate local business concerns were being restricted as no bonus or commission was forthcoming from such business. The result of the tying up of vast amounts of money in non-liquid assets was that the regular business of the country was practically forced to continue, if it could, upon a note or credit basis. We never had so much paper forced on us by customers as at this time.

"The whole situation to my mind was a bankers' panic—not a business man's affair—and their attitude at the present time proves by its extreme conservatism how violent the reaction was. It is small credit to the banks that business men survived the strain as well as they did, and it speaks volumes for the steady common sense of the average American citizen who still has faith in the credit and future of the legitimate business of the country."

28. PHARMACEUTICAL SUPPLIES:—"In our opinion the main cause of the financial trouble was the over speculation in stocks of all descriptions pro-

ducing fictitious values, and when prices of such securities dropped to their natural level, bankers suffered by reason of the shrinkage of their securities, thus causing a curtailment of their loans and producing a panic among the depositors, many of whom withdrew and hoarded their money."

29. **HATTERS FUR:**—"In our opinion the main reasons for the panic were overspeculation in securities, and in some cases dishonest business methods which caused an unreasonable fear on the part of the public. Because of this distrust money was drawn from the banks in large amounts and hoarded by its owners. The banks, in self-defence, held on to what cash they could control, and thereby greatly aggravated the situation. We can see no other reasons for this depression of business, as all other conditions throughout the country were favorable to continued prosperity."

30. **TEXTILE MACHINERY:**—"Speculation to a large extent, coupled with manipulation of banks by certain financial sharps; the attitude of the administration toward large money interests, all combined to frighten the ordinary class of people, who lost their heads, and the panic was the result."

31. **PAPER MILL MACHINERY:**—"Too much speculation started the trouble with the New York trust companies and banks, and that scared many depositors—small and large—so that they withdrew money from circulation and hoarded it away. A great many banks also did the same thing in fear of a run or heavy call on them for funds, thus making the matter worse."

32. **RECLAIMED RUBBER:**—"The country was doing too large a business on too small a capital. There was too much wild cat speculation; there was some very disgraceful conduct disclosed among some of the leading capitalists of New York in regard to banking and railroad propositions. We think a combination of all these things caused a general loss of confidence and a hold up in business, and it will be six or eight months from our point of view before things become normal again. We are now doing 50 per cent. of our ordinary business."

33. **HAT BOXES:**—"My opinion of some of the causes of the financial trouble is briefly as follows: The insufficient supply of money and the numerous impediments in the way of its free and proper circulation; the latter largely due to lack of confidence of the people in the management of large banks and trust companies. Also the unnecessarily large accumulation of reserve funds in banks; the concentration of capital in monopolies for personal gain; the fictitious values placed upon stocks, and the disturbance of values caused by Wall Street stock gambling."

34. **FELT HATS:**—"The usual causes which have almost always ensued at the culmination of long periods of so-called prosperity—namely, exorbitant prices of all material and labor, extraordinary speculation in

everything with consequent heavy borrowing, and a non-elastic currency system which demoralized confidence when the general conditions became top heavy and unwieldy. All of this was augmented by identically the same conditions prevailing in all parts of the world."

35. FELT HATS:—"In our opinion the financial trouble and business depression which we are now feeling was caused by the number of wild cat adventures which were entered into by people without sufficient capital, and the banks loaning money on poor security. Lack of confidence in the stability of business concerns has brought about a condition of stagnation which will not disappear until confidence is restored. Our opinion is that legitimate manufacturers are feeling this depression more to-day than at any time since the panic began, and we do not look for any improvement before next fall."

36. HATTERS FUR:—"Inflation of cost of material used in manufactures, thus necessitating a raise in prices which of course required just so much more money to do business with; other causes are: the immense amounts of money used in speculation and wild cat ventures promising large returns, most of it loaned on collateral which could not be quickly turned into money. Another cause was the immense quantity of gold produced at the mines, which caused an inflation of values."

37. PORTLAND CEMENT:—"The civilized nations of the world, notably the United States, Germany and Japan, have been speculating and living much beyond their means, and this extravagance has been maintained notwithstanding the destruction of property and capital in the South African and Russo-Japanese Wars, and also by fires and earthquakes. The United States will be the first to recover because of its greater wealth in natural resources, and we may look for a return to normal conditions before the end of 1908."

38. FOUNDRY AND MACHINERY:—"Over-speculation of a risky character; too much expansion on insufficient capital. Large numbers of people had lines out in too many directions, and when the cloud appeared, found themselves unable to land the game."

39. VASELINE:—"Causes of trouble were: General overproduction and overdoing of business; over-speculation and over-valuation in financial quarters; exposure of unsound conditions and wrong doing in certain financial institutions; general depression throughout the world, particularly in this country, and the enactment of laws—national and state—against railroads and other corporations."

40. CARPETS AND RUGS:—"Over-speculation, and too many 'get rich quick' financiers whose names and disreputable practices were made known to the public through the several legislative investigations. Banks extended

large credits to individuals and concerns not worthy of such consideration. These manipulators found it too easy to get money. Distrust was created in the public mind by the exposures which followed the investigation by the Public Service Commission of the railroads of New York City, when the nefarious doings of certain men of high financial and social standing connected with the management of these corporations were brought to light. When it was publicly known what men like these would stoop to do under the influence of money greed, the public lost confidence in everybody. On top of these exposures came the suspension of the Knickerbocker Trust Company, and we all know only too well the results that followed. The writer does not think it fair to attribute the trouble to the stand of the administration in favor of honesty. If the President had never uttered a word, the conditions above mentioned would have produced a panic in due time."

41. CRACKERS:—"To our mind and experience the causes of our financial and business troubles are: Abuse of privileges, dishonest practices, too cheap money and wild cat speculation. Our charge of dishonest practice is based on our experience of getting seven-eighths for an inch, eleven inches for a foot, twelve and fourteen ounces for a pound, twenty-one sheets for a quire; even as low as sixty-nine pounds for one hundred, and labor giving five hours' work in return for eight or ten hours' pay. This does not exhaust the list, but there is enough to show how business confidence is being undermined by sharp practices."

42. WHOLESALE BAKERY:—"In our opinion the fundamental cause of the financial trouble was over-speculation and lack of economy among all classes, with consequent waste of capital. Confidence having been gradually undermined by the life insurance scandal and other disclosures, was utterly lost when the bank troubles developed in New York, and the money stringency followed as the only possible result."

43. PRINTING AND BOOKBINDING:—"Cause of the industrial depression was the widespread distrust in the financial institutions of the country, due to exposures of irregularities in New York City insurance companies, trust companies and banks. Back of this lay the deeper reason that obtaining money was too easy, and many were thereby tempted to branch out wildly into all kinds of business propositions and take up all sorts of securities.

"Then, too, the great destruction of property and loss of capital in the Russian-Japanese and the Boer wars, together with the losses by volcanic eruptions, earthquakes and fires, at Martinique and San Francisco, had their influence in diminishing the total wealth of the world."

44. SKATES AND HARDWARE:—"In our opinion the financial and industrial trouble is summed up in the following: Money loaned by financial institutions on worthless securities; inflated values of other stocks, and reckless manipulation of money by the banks. There was no over-production of

goods that we know of; no manufacturer who has an abnormal stock. In fact, practically all of them are short of saleable goods."

45. SADDLERY HARDWARE:—"Dishonesty, speculation, or call it what you please, is, in our opinion, the main cause of the trouble. A loss of confidence as the result, and a general retrenchment all along the line. Lawful (?) 'get-rich quick' schemes at the expense of the honest and confiding masses. The trouble is certainly not due to poor crops, or over-stock of goods of any kind. Scarcity of actual money in proportion to the large volume of business and a too free use of paper have contributed their share."

46. ELECTRIC RAILWAY SUPPLIES:—"Doubtless many conditions were contributory to the financial trouble, or helped to make it possible, but it seems to us that the precipitating cause was the use of too large a share of the money of the banks—which is to say the money of the country—in speculative enterprises, such as joint stock floatations and exchange. The large profits made or promised in stock operations created a demand for funds which prevented what we think may justly be called by contrast 'legitimate' business from obtaining bank loans justified by assets and transactions.

"For instance, nearly a year ago a bank official said to an old and profitable customer, a manufacturer: 'You expect us to loan you money at six per cent. when it commands thirty on the street.' Considering the revelations thereafter made, is it any wonder that some of the banks found themselves truly 'on the street' and in a tattered condition? But for the judicious 'hang together' policy of the clearing houses many others would have shared the same fate. No sane person will avow that this condition of things was in any sense due to an improper extension of legitimate business.

"Unquestionably over-capitalization of many enterprises, intrinsically legitimate, such, for instance, as transportation companies, imposed a disproportionate drain upon their incomes for fixed charges and dividends, and so drove them to the issue of new obligations to raise the means for additions and improvements required by their current and growing patronage.

"That the currency lacks flexibility and perhaps other useful qualities is apparent enough and such infirmities should be corrected, but the absorbing power of speculation seems to be without limit. Suppose the banking capital were increased, even doubled, those who control vast fortunes and the stock and bond issuing power of great corporations, and are adepts in market manipulation, might still be able to tie up in their gigantic operations so much of the money available as to duplicate the embarrassments we have recently witnessed. We are not presuming to suggest a remedy, but we do think that one should be sought and that it must go further than the reform of the currency, excellent as some measures for that purpose that have been before Congress appears to us to be."

47. HANDKERCHIEFS:—"The causes of the financial trouble were: Unwise speculation in products and stocks at high prices; extremely high prices for material and labor; unsatisfactory banking methods and lack of enforcement of laws governing the same; bearish manipulation of stocks by

speculators, and unseasonable weather conditions during the past year, causing the carrying over of large stocks of unsaleable merchandise."

48. FILES AND TOOLS:—"Over-speculation, over-capitalization, illegitimate banking in furnishing funds for furthering gigantic schemes of finance of doubtful character, thereby destroying confidence, hindering industrial activity, and suddenly interrupting a prolonged period of prosperity, thus causing rapid shrinkages of values and withdrawals of money from circulation. Control of financial institutions vested in syndicates and used as a means of financial gain. Banks and trust companies loaning on questionable collateral to a favored few, thus depriving the manufacturer and merchant of proper assistance in time of need."

49. JEWELRY:—"Lack of confidence and uncertainty caused by the disclosure of corrupt business methods, and a drawing in of capital on account of over-speculation by some business interests."

50. BROAD SILK GOODS:—"Excessive speculation and unwarranted inflation of values, with the diversion of capital to the support of meretricious enterprises, were the direct cause of the financial stringency and the industrial depression. Considering the corrupt conditions which prevailed, the panic was unavoidable and it would have been better if it had occurred sooner."

51. BROAD SILK GOODS:—"In our judgment the financial troubles were brought about by over-speculation in some quarters and over-expansion in others—the latter extending all over the country and embracing nearly every form of industry. Too much money sunk in speculative schemes based on little if any value. Dishonest management in some of the largest financial institutions and corporations, and finally by the unsafe and inadequate banking system which has proven itself incapable of meeting the difficulties under which we are now struggling. We believe that some form of government control ought to be established over the banks, and also that, as in England and France, a central national bank should be established by the government."

52. BROAD SILK GOODS:—"Lack of confidence which followed the exposure of instances of so-called 'high financiering.' An increasing tendency toward engaging in wild speculation, caused by alluring promises of large profits. While there has been a distinct falling off of business with us since last December, present conditions are worse."

53. BRASS FOUNDRY:—"In my opinion the 'slump' was the result of unusual prosperity, in the wake of which followed wild and reckless speculation. The fictitious values which naturally followed, together with the surprising revelations of dishonest financiering, did the rest."

54. IRON FOUNDRY:—"Believe we were going faster than the money conditions, cash and credit, could allow. Business in 1905-1906 was enor-

mous, more than railroads could carry. It naturally required large sums to finance such immense production and transportation. As a direct consequence of this efforts were made to enlarge factories, stores, railroad equipment, etc., which required the borrowing of large sums of money for the purpose of carrying out such improvements. In the fall of 1906 and spring of 1907 difficulty was experienced in marketing stocks, bonds and other obligations, and the struggle for money commenced, with the result that interest on loans advanced to high figures and values fell. The shrinkage in values in this country from three to a seven per cent. interest basis would amount to billions of dollars."

55. IRON FOUNDRY:—"There are a number of causes for the industrial depression, all of which may be called prominent. We would place—first, that the credit facilities of the general public had been largely exhausted, the money available from such credit facilities having been used, some for unfortunate speculation, some for permanently unremunerative enterprises, more in construction of plants still unproductive and hence not entitled to business credit, these conditions being spread to a greater or less extent over the entire country.

"The localities that appear to have been least able to carry their burdens during the troubles were California, New York and Pittsburg, as an adjunct of New York.

"The center of the disturbance, as we all know, was in New York, where certain institutions and individuals had lost the confidence and support of the most conservative element whose funds were withdrawn as it was possible to do so, up to a point where it was essential for their own preservation to render assistance for the purpose of stopping the disturbance thus caused.

"Demand obligations on the one hand, with assets invested in time obligations, is a most serious condition for a banking institution to be in, unless there is a margin or reserve sufficient to meet any call that may be made in time of stringency. It is always difficult to conduct a banking institution on this basis, hence that character of business is full of dangers, and liable to more or less frequent spasms. The bank panic and loss of confidence on the part of depositors, led to an extensive stoppage of production, and consumers generally limited their purchases to absolute and immediate wants. This method of existence and tone of thought will gradually wear away, and would have already begun to do so if the prices of commodities had fallen to a level which seemed appropriate to surrounding conditions. The general hesitation as to the reduction of wages tends to postpone the readjustment of costs and values, which if done would facilitate the starting up of active business on the assurance that prices had reached their lowest possible point and nothing further could be gained by delay."

56. ANVILS AND VISES:—"Over-activity of promoters; wild speculating and stock watering. Over-straining of credit in manufacturing and trade; exorbitant wages demanded by building trades workmen. Impossible to meet competition because of this."

57. **BAR IRON:**—"In our opinion the cause of the financial trouble was over-extension of credits, particularly for speculative purposes, and the hostile attitude of the administration toward prominent corporations."

58. **STEEL PENS:**—"Our impression is that the country has been going at too rapid a pace for the past few years, so that all sorts of financial schemes were projected for public support, many of which had no solid foundation; the collapse of many of these was inevitable, and it is fortunate in our opinion that a check has been put to many of these unsound speculative enterprises."

59. **HAT PINS AND NOVELTIES:**—"In my opinion the cause of the depression was that too much money had been sunk in insane speculation, and too much money had been loaned on insufficient security."

60. **CUTLERY AND HARDWARE:**—"Wild cat speculation; over-inflation of security values; dishonesty of officials in some financial and banking institutions, all combined to destroy confidence, which is the basis of all business."

61. **CARRIAGE MOUNTINGS:**—"Too much extravagance; inflation of business—especially of investment securities; stock speculation; trying to do large business on narrow capital; general recklessness and extravagance in living, the results of recent prosperity; mismanagement of financial institutions, all together caused the general public to take warning and retrench."

Governmental Interference With Business.

62. **STEAM ENGINES:**—"In our opinion the financial trouble can probably be traced back to the insurance scandals of three years ago, and the impairment of confidence by the incidents that followed, plus unwise legislation against railroads, which in our opinion is altogether too drastic."

63. **RUBBER:**—"The trouble was caused by the injudicious speeches of persons high in authority, directed against corporations. The value of the products of the country for the year preceding the panic was above normal; the amount of money in existence per capita was the greatest in the history of our country, and but for the cause above referred to, we are strongly inclined to believe this trouble would not have occurred."

64. **PARCHMENT PAPER:**—"We believe the financial trouble to have been brought about by constant agitation and legislation at Washington, which caused distrust among the people and many invested their money in land, of which a great deal is unproductive, and others have withdrawn from corporate interests and are hoarding their money, which would in itself cause the financial stringency."

65. PARCHMENT PAPER:—"Radicalness in high places; the big stick swung at random; too much interference in business by politicians who know nothing about business requirements."

66. CHEMICALS:—"Immediate cause of the financial trouble was the loss of credit caused by governmental investigations of certain corporations. But we do not lay the blame to the action of the President, which only hastened the time that was bound to come sooner or later, as credits had been greatly extended in all lines of business, and the methods in vogue by many men high in business circles were dishonest. As soon as the public became aware of these facts, a drawing of deposits from the banks was the natural consequence. It may be that, as rumored, the large money interests in New York depressed prices in order to discredit the President's policies."

67. MACHINERY:—"I. Doubts as to the policy to be pursued by the government and the legislatures of the various States in regulating interstate commerce and determining rates and values. No one wants to invest money and leave the politician to fix his profits.

"2. The large number of investigations showing irregularities, small or great, had great weight. 3. The natural reaction that comes always after large business expansion should be expected. 4. The growth of socialistic doctrines, and their advocacy by many political leaders in and out of office, tends to make capital very cautious. The careful are sitting tight."

68. STEAM ENGINES:—"The panic undoubtedly originated in action taken by people in high positions, which discredited many large undertakings, and the possibility of absurd and meddlesome laws being enacted which so hampered institutions that while they were responsible to their stockholders for dividends they could not control the business that was to earn them. This distrust seems to us to date back to the insurance investigation, which resulted in shaking the confidence of many people, and this continued and was made worse by the unwise actions of the government."

69. MACHINERY:—"Loss of confidence in the financial world caused by strenuous and continued harrowing of business men by the government."

70. MUSICAL INSTRUMENTS:—"We believe the currency of the country to be sufficient for its business, but there is a lack of confidence among moneyed men that is accounted for in various ways. The insurance investigation in New York City a few years ago caused a feeling of uneasiness at home and abroad; this, together with the Federal rate bill, which started a movement in nearly all the State legislatures to regulate everything and everybody, has caused capitalists, large and small, to stand aloof and allow affairs to take their course. These things, together with what Carnegie calls the worst banking system in the world, go far toward accounting for our trouble."

71. VARNISHES AND COLORS:—"We think that the business depression was due to loss of confidence on the part of investors, caused mainly by indiscriminate attacks on corporations by both National and State authorities, but chiefly by the former. Investors were unable to tell how the enterprises that required money were to be affected by the action of the government, and preferred to retain their capital until conditions became more stable; hence the expansion and development of established industries and the starting of new enterprises was made impossible for lack of money. Depression in business always follows periods of prosperity, but we believe that this depression was precipitated by the actions mentioned."

72. WINDOW SHADES:—"It seemed to have been generally thought in business circles during the greater part of last year, that a set back was bound to come; this feeling was based on the steady decline of standard securities, the tightening up of banks as regards making loans, and the high cost of money. The hostile attitude of the administration toward corporations contributed to bringing about a lack of confidence and apparently only a few failures were needed to bring on the catastrophe."

73. STRUCTURAL STEEL:—"The causes of the financial and industrial depression are: General alarm and lack of confidence occasioned by—first, the exposure of dishonesty and corruption on the part of men prominent in financial and business affairs. Second, exaggeration of the above condition by politicians accompanied by disquieting messages to Congress and the passage of drastic railroad laws by the State legislatures. Third, the advocacy by the President of measures calculated to harass capitalists and employers of labor, while ignoring and thereby encouraging the lawless methods employed by the tools of labor unions to enforce the closed shop."

74. THREAD AND YARN:—"Our financial troubles were the result of the insurance scandals, the action of the Federal Government in attacking railroad and other corporations, and the exposure of the methods by which certain financiers control these concerns; all these made people distrustful. The natural result followed: shares were unloaded in such quantities that the market was glutted and prices fell to an unreasonable point. Then as the excitement increased, these same people commenced to draw their money and hoard it, which compelled the banks to practically stop loans, and increase their reserves for their own protection."

75. PREPARED FOODS:—"Our business began to be affected by the so-called Chicago revelations, about June, 1906, and we ascribe the cause to the injudicious handling of the matter by the Federal Government, the hasty enacting of laws which injured the honest manufacturer as well as the law-breaker, and the unending stream of new rules and regulations as vexatious as they are useless. In our opinion the above, by practically destroying confidence in American goods abroad and putting a stop to the exportation of American canned meats, was the first step in the wrong direction which

the present administration has since followed by constantly harassing business interests in the same spirit, the innocent being made to suffer just as much as the guilty."

76. PRINTING AND STATIONERY:—"We believe that the causes of the financial troubles were the large fine imposed upon the Standard Oil Company; the suits against the railroads for rebating; the investigations of different utilities controlled by large corporations, and the general distrust resulting from the disclosures of these suits and investigations. The result of all this was that the value of stocks was forced away down through the desire of investors to sell. Collateral held by banks became inadequate to secure loans, and the banks had to force sales and call loans. Under these circumstances when people got money they held it, and consequently circulation fell below the requirements of trade."

77. GLASS:—"The trouble is, we think, largely due to legislation actually enacted or threatened, adverse to the interests of corporations, the concerns of which are as much the interest of the employes as the stockholders. Too much agitation. The patient will get strength if let alone and not operated on every few days."

78. WATER TOWERS AND STAND PIPES:—"Our opinion is that several chief causes contributed to the break of prosperity. These are: Adverse and detrimental acts by the National and State law makers; speculation in securities without any intrinsic value; and socialistic and labor union theories incorporated into American politics. A return to reasonably normal conditions will be slow and cannot be looked for until the man with money to invest learns the policy of the next administration and feels safe therein."

79. STEEL PIPES AND TANKS:—"The financial trouble seems to us to have sprung from the drastic legislation against corporations going on all over the country, and from the ill considered utterances of those high in authority, so that the money interests became alarmed."

80. JEWELRY:—"We owe the trouble of last Fall to a lack of confidence on the part of the business and banking world, occasioned to a great extent by the fact that the President of the United States and the legislatures of the various States, by a constant meddling in affairs with which they are not conversant, and to the almost socialistic methods by which they have sought to change the laws relating to large corporate and investment business."

81. WATCH CASES:—"Too much interference on the part of the national executive and others with business conditions. If the government would let railroads and general business alone, there would have been no panic. Legislation amounting to practical confiscation is the cause of the trouble."

82. BRASS AND COPPER TUBING:—"The cause of the recent panic in our opinion was the misinterpretation and over-zealous enforcement of the Sherman Act, and other forgotten laws."

83. IRON ROOFING:—"Loose and unsafe methods of doing business on the part of some banks, and loaning money on unsound securities. The very aggressive and strenuous manner in which the government at Washington threatened the railroads through the Interstate Commerce Commission, and the wielding of the 'big stick,' first started the ball rolling and clogged the wheels of industry and prosperity, which the country enjoyed for several years previous to October, 1907."

84. ARCHITECTURAL IRON WORK:—"The writer attributes the panic to unwise legislation in regard to corporations, and too much political agitation over financial affairs, thus alarming the money interests, which resulted in the withdrawal of capital, a contraction of credit, and a natural slowing down of business."

85. SILK RIBBON:—"Undiplomatic governmental interference with private and semi-public enterprises, which while doubtless requiring proper supervision, should have been dealt with in a businesslike manner and not with a 'big stick.' More intelligent men, and fewer demagogues and partisans at the head of our government is what we want."

86. BROAD SILK GOODS:—"Reasons for the financial crisis through which we are now passing is in our opinion the attack on railroad and other corporations by the administration at Washington. Existing wrongs should be righted, but by different means than those employed by the Federal Government."

87. BROAD SILK GOODS:—"We believe the cause of the depression to be the strained condition of the money market and credits; also the illegal practices of a number of bank directors. We think also that conditions were made much worse than they might otherwise have been by the action of the national executive and State legislatures. Their course resulted in a withdrawal of capital and credit when these were most needed."

88. SHOES:—"Certain legislation—National and State—is, we believe, at the bottom of the trouble. A capitalist is not safe in investing his money not knowing from year to year when the entire set of rules established by the government, may be changed. One general law stablished on a uniform basis in all the States would, we think, help matters very materially."

89. TRUNKS AND BAGS:—"In our opinion the recent financial trouble was due to the loss of confidence resulting from the antagonism of the present administration to the financial interests of the country, together with the inflammatory speeches which were published and spread broadcast over

the country by the press. The trouble was not in any degree due to over-production; just the loss of confidence and withdrawal of money from free circulation."

90. IRON FOUNDRY:—"In our opinion a number of causes contributed to the state of affairs that existed during the last quarter of 1907, and up to the present time, but we think the primary cause was perhaps the over-zealousness of the administration at Washington in endeavoring to curb the so-called trusts and regulate interstate commerce; in other words, we believe that suffering was brought upon the entire country because of the wrongdoing of a few men, guilty of practices that, while unlawful, had been tolerated for many years. Uncertainty regarding the policy of the incoming administration had some bearing upon the trouble.

"It will be recalled that until the outset of the present panic business had been running along in the usual way, and nothing indicated a coming break. The greater number of large manufacturers had anticipated a continuance of favorable trade conditions to the end of 1908, and therefore entered into contracts for raw material and other supplies sufficient to carry them through on that basis to the middle of the year. This has wrought a decided hardship to many, and particularly to those engaged in our line, as the price of pig iron had dropped \$7.00 per ton, and other materials in like proportion. The generally prevalent opinion that our money centers were primarily responsible is to our mind entirely incorrect, as in the previous panic in Wall Street, while stocks and listed securities fell to a fraction of value the manufacturing interests throughout the country did not feel its effects in the least. Our volume of sales has fallen off greatly, and present prices are the lowest in our history. We have piled up stock to an enormous extent, feeling, as do other manufacturers employing skilled labor, that we should endeavor to keep our men together, besides which we were hopeful that a change for the better would take place in the immediate future."

91. FOUNDRY EQUIPMENT:—"We come in touch with a large number of brass foundries and brass manufacturers and find that while a few of them have been obliged to close for lack of money there is an even greater number who are proceeding to make improvements and enlarge their productive capacity in anticipation of doing a larger business.

"As to the cause of the financial crisis, we think the primary one was the state of mind of the people as a whole. It appears as though the trouble was greatly helped by unseen and powerful influences which were dissatisfied with the present administration."

92. FOUNDRY:—"In our opinion the financial trouble was caused by a too rigid investigation of corporations all at one time. We believe that had the matter been conducted on a smaller and more gradual scale it would not have disturbed public confidence in the manner in which it did. While we believe the investigation was needed, we do not think that everything should have been exposed at once."

93. CUTLERY:—"In our opinion the national administration is responsible for the financial trouble, but we, nevertheless, approve of the action taken in the matter, believing, as we do, that if the large corporations had not been brought to a halt now there would have come a time when things would be much worse than they are now."

94. CUTLERY:—"The activity of the administration in denouncing certain corporations and the incessant reiterations of threats directed against them, also the continual cry of sensational newspapers that the people were being robbed by the corporations, created a deep and widespread feeling of distrust in the honesty of men identified with the management of our large monetary and business institutions. Rash speculation contributed its share, in that bank funds were diverted from legitimate business to be used for the promotion of get-rich schemes. Distrust of the banks caused depositors to withdraw and hoard their money. While we endorse the attempts of the executive to reform abuses, still as business men we believe that more good would have been accomplished and far less harm done if the crusade had been carried on in a different way. In other words, if one desires to enter a house for some legitimate purpose, he should go in by the door, and not over a battered down wall."

95. LAMP BURNERS:—"Loss of confidence on the part of the public in our finances and the general belief that everyone and everything were contributing toward a revolutionary change in our commercial and social conditions. A bank failure which would have caused scarcely a ripple at any other time was sufficient to start the ball rolling. The general commercial conditions were in an exceptionally sound shape, and only the most energetic efforts of political demagogues in their role as commercial anarchists were able to bring about the catastrophe which we have passed through."

96. RAILROAD EQUIPMENT:—"In our opinion the causes of the financial and business depression are all traceable back to the agitation by the administration against corporations, particularly the railroads."

Lack of Confidence in Business Honesty.

97. SPECIAL MACHINERY:—"We believe the trouble was caused by the inability or unwillingness of the banks to extend loans to business houses; the scarcity of money which followed a general withdrawal of funds from the banks by depositors because of distrust in the integrity of bank management. There appears to be no good reason for such suspicion, except that a few men who had stood high in popular estimation were guilty of gross wrong-doing, as shown by the New York insurance and bank investigations. These violators of law should be made to suffer the penalties of their wrong-doing. Their prompt punishment would go a long way toward restoring public confidence."

98. COTTON AND SILK EMBROIDERY:—"In our opinion this money crisis was caused in the first place through over-expansion in substantially every line of business. Corporations, firms and individuals were doing a volume of business beyond that justified by their working capital; factories and plants were being enlarged without proportionate increase of capital. In the face of this condition of extreme tension, the New York bank suspensions and investigations were sprung upon the public, which caused widespread distrust, followed by the withdrawal and hoarding of bank deposits, and the stoppage of credits to manufacturers and business men. The resulting panic was, in our judgment, caused by lack of confidence, and not in any sense by lack of money, as the funds that under normal conditions would have been circulating in the channels of business were withdrawn from the banks and hidden away.

"Our New Jersey banks were not directly affected, because they were not tangled up in wild-cat speculation, but as the money markets of the country are governed indirectly by the great banks and financial institutions of New York, many of our manufacturers and business men experienced difficulty in getting money during the crisis."

99. ART NOVELTIES:—"We think it was simply a false alarm, without any reasonable cause; stampede, panic and disaster followed and the people are still afraid of the 'bogey man.' When they fully realize that there was really nothing to cause the fright business will resume normal conditions."

100. FIRE BRICK:—"Disturbance of confidence of people in industrial undertakings on account of disclosures of improper manipulations by large New York corporations."

101. BUILDING BRICK:—"The depression was caused by wild speculation by certain men in New York City, connected with banks and other moneyed institutions; fear on the part of depositors caused a run on trust companies and banks, fall in value of railroad and other stocks and want of confidence on the part of depositors and business men."

102. FIRE BRICK:—"Loss of confidence in corporations caused by revelations of conduct of men controlling some of them. Distrust of banks because of their association with bad corporations or those under suspicion. Withdrawal of funds from circulation and inability to prosecute business from lack of money."

103. WIRE GOODS:—"The industrial depression is the result of a total destruction of public confidence, primarily induced by the readjustment of a large part of the public conscience to principles of right, first initiated by the New York insurance investigations which exposed the venality of some men that had posed as models of righteousness. We have an abiding faith in the success commercially of the United States, and are confident that the

whole country will promptly resume its former business speed when the period of readjustment is passed."

104. RUBBER SPECIALTIES:—"The financial crisis began to make itself manifest about a year ago; it was caused by popular distrust of the management of large corporations which naturally followed the disclosures brought out by investigation of some of them. Over-production and reckless speculation were also in part responsible. We look for a gradual resumption of business coincident with the return of confidence in large corporations.

"The so-called financial leaders are few in number, and their power—almost always wielded for selfish ends—rests on the immunity from personal punishment for wrong doing, which, by reason of great wealth, they are popularly supposed to enjoy. The business world is tranquil or disturbed as they may be best for the furtherance of their plan.

"If by some means those in control of the legitimate business interests of the country could be induced to turn in a body against the disgraceful rule of these financial Ishmaelites who are powerful only because of slavish submission to their dictation, a condition of things such as we have now, with capital in hiding, factories wholly or partly closed, honest men ruined and labor without employment, would be unknown hereafter."

105. CIGAR MAKING:—"In my opinion want of confidence in the stability of large banks and trust companies is the direct cause of all the trouble; watering stock and other methods of creating so-called wealth without any real basis of worth has powerfully contributed to the financial disorder. The President's denunciation of such methods created a feeling of alarm among the people and depositors withdrew their money from the banks, leaving these institutions with no other resource than the sacrifice of securities at prices away below their actual value in order to continue payments. Old loans had to be called in and making new ones practically ceased, no matter how good the collateral offered as security. This greatly diminished the volume of money in circulation and necessarily a corresponding shrinkage in the volume of business done.

"It is mortifying to know that a few men are absolute masters of the finances of the country, and are able at will to bring about such conditions of money scarcity that legitimate industry is nearly starved out of existence. This is certainly a dangerous state of affairs, and good laws sternly enforced are needed to protect the people in their natural rights; not before this is done will the continuance of prosperity be assured."

106. VALVE SPECIALTIES:—"The cause of the present business depression is largely a matter of opinion. Up to October 1st, 1907, business had been carried on under 'high pressure' and money was plentiful. Possibly adverse decisions in the courts against railroad interest may have been one of the causes of the disturbance of confidence in the money market. The failure of the Knickerbocker Trust Co. exerted a powerful influence in spreading

distrust. The fact that a corporation of such magnitude and reputation could fail caused a widespread panic, accompanied with a general movement for the withdrawal of actual money from circulation. The refusal of banks to grant loans compelled contractors and others having extensive improvements under way to discontinue work in hand. Prices of material are declining, and it is presumed that but little buying will be done until 'bottom prices' are reached."

107. FURNITURE:—"Exposure of the questionable methods employed by large financial institutions robbed the public at large of confidence in banks. The people, not knowing to what extent it would go, withdrew their deposits and held on to what money they had instead of spending it as usual."

108. FERTILIZERS:—"The only reason we can give for stringency in the money markets of the East is that the Western banks, in unreasoning fear of future trouble brought about by baseless rumor, held fast to their money, thus cutting off the normal flow of funds to Philadelphia and New York banks."

109. WORSTED CLOTH:—"Agitation and legislation in various States adverse to capital, particularly that invested in railroads, and consequent loss of confidence by investors."

110. KNIT UNDERWEAR:—"During November and December of each year we have always succeeded in selling up our production for the following winter season; up to the present time (April) we have sold about one-quarter of our products, and there are but small prospects of being able to dispose of the balance. Lack of confidence at the time of the financial disturbance led to the curtailment of production and the laying off of a great many employes, who are, in fact, an important part of the purchasing public. Hence, our opinion is that while these people are unemployed, or on short time, business will not be as brisk as it was formerly. All this is due to lack of confidence, which renders railroads and industrial corporations unable to borrow sufficient money to keep business moving."

111. KNIT UNDERWEAR:—"In our judgment the 'panic' was entirely unnecessary, being merely the result of nervous apprehension which grew out of sensational newspaper reports. Such a condition might be brought about at any time if the people can be made to stop buying all but the absolute necessities of life under fear of what might happen."

112. CORSETS:—"In our opinion the late financial trouble was caused primarily by parties prominent in industrial and financial affairs. Their use of funds entrusted to their care for their own private purposes, foisting quantities of questionable securities upon institutions with which they are connected, thereby engendering a feeling of insecurity, and destroying that confidence which is so necessary for the maintenance of the economic con-

ditions under which we live and labor. We hazard the opinion that the trouble was due more to apprehension than to actual conditions."

113. **ELECTRIC LAMPS:**—"I am inclined to believe that the causes of the financial trouble might be summed up in the expression, 'want of confidence,' which is possibly the natural sequence to the various alarmist articles published from time to time during the past few years. 'Constant dropping will wear away a stone,' and there is no question but that the constantly recurring newspaper attacks and criticisms did a lot of harm. As it stands now, I do not look for much business activity until after election—this being Presidential year. This unsettling feature would be decidedly better if held every eight or ten years."

114. **ELECTRICAL APPARATUS:**—"In our opinion the stringency was due to lack of confidence caused by questionable business methods in certain New York banks and financial institutions, aggravated by tactless and unmerited attacks on corporations in general by those occupying high positions in the government."

115. **MIRRORS:**—"An over-extension of credit brought about by the fact that for several years the country has been very prosperous and nine-tenths of those engaged in industry have been increasing their business until a very large part of the mobile capital of the nation was tied up in such a way as to be unavailable for general purposes; this, with loss of confidence among the people, because of disclosures of dishonesty in the management of certain hitherto highly respected financial institutions, really led to the panic."

116. **GLASS BOTTLES:**—"Lack of actual currency with which manufacturing and other legitimate business interests could be kept moving. Hoarding of currency by individuals, probably due to lack of confidence on part of the public in the men and methods of our large financial institutions. Personally we can see no reason why there should have been a panic."

117. **FILES AND RASPS:**—"Causes of the money stringency, in opinion of the writer, are dishonest business methods on the part of corporations and individuals to get more than their share of the products of labor; the reckless investments to secure these ends by stock gamblers and others who seek to obtain something for nothing, disregarding business ethics and common sense honesty which require that in all legitimate transactions of trade there should be an equal exchange of values. The common knowledge of this crooked work by the public exposure of the same, then the efforts of the National and some State executives in the same direction, has created a lack of confidence among the people, causing them to hold on to their money instead of buying things, thus bringing about a business depression which, no doubt, will be temporarily extended by the uncertainty of results of the coming Presidential election. To effect a permanent cure, the

real causes of the trouble must be removed. This, in due time, will come to pass."

118. **MECHANICS' TOOLS**:—"High living on the part of those holding positions of trust, resulting in dishonesty in order to keep pace with the next biggest swindler. Then the panic, seeing the unreality of things, lost confidence, and things tumbled."

119. **WIRE GOODS**:—"In my opinion the exposure of the way in which trust companies and corporations were being managed, followed by governmental prosecution of railroads and large corporations for alleged business transactions and methods, which later was followed by the exposure of illegal use of trust and bank funds by officials in their 'get rich quick' schemes, upset the confidence of honest business men and the people in general. Naturally, the withdrawal from the banks, and hoarding of large sums of money followed, to the great detriment of business.

"At no time was there an actual shortage of money, but the manufacturers, banks and business men in general were frightened, and their timidity came very near to producing a far reaching panic. The dozen men—more or less—who control a great part of the nation's wealth, saw in the situation, which probably they had helped to create, their chance to invest their surplus funds profitably, and were not slow in availing themselves of the opportunity, while posing at the same time as the country's saviours."

120. **BRASS AND COPPER WIRE**:—"It is the writer's opinion that the recent depression of business was caused by dishonest speculation, inflation of values, over-extension of credit, and also a desire, on the part of some financial interests to discredit the present Federal administration.

"The life insurance disclosures, the New York traction frauds, and bank scandals, both in New York and Chicago, all tend to prove that many of our leading citizens who stood high in the community were thoroughly dishonest, and people having money in these insurance companies and banks naturally became alarmed.

"With us particularly, the bad feature has been the copper speculation which has caused heavy losses to every manufacturer handling copper. Many of us within one or two months lost more than our total profits for the entire year. In the face of large accumulations of copper, prices were forced to a very high level, and when over-production could not be held in check, a severe break occurred which caused manufacturers in that line to hesitate before purchasing any more of this metal than they actually had orders for.

"A contributory cause, no doubt, was the extension of credits. In these days there is too much business done on borrowed money, and many manufacturers lack sufficient capital to handle the business they undertake. This method of doing business is wrong, and will sooner or later bring disastrous results.

"For many years past the larger financial interests have, no doubt, exerted an undue share of influence over our national government, and with the railroads have acted as though they were above the law, and even greater than the government itself. Until our present executive took office these interests were able to dominate and dictate to the people generally, but during the past seven years these conditions have radically changed, and these interests have been brought to their senses. The writer thoroughly believes that owing to dissatisfaction on the part of the interests as above referred to, some of our financiers, instead of doing their best to prevent any unsatisfactory condition of business, rather contributed in their own way to bringing it about. The foregoing is a brief outline of what in the writer's opinion was directly responsible for the crisis. Of course there were other contributory causes. We, however, are not a bit discouraged and expect that within a short time business will resume its old-time vigor, and that in consequence of the recent depression, business, for a few years at least, will be even better than it has been in the past."

121. HEATING AND COOKING APPARATUS:—"Over-speculation in Wall Street, and lack of confidence brought about by the scandals of men in high positions in financial and railroad corporations."

122. JEWELRY:—"Reaction from immense destruction of property at San Francisco, and by the Russo-Japanese War; the excessive use of credit for the almost universal expansion of legitimate business; wild cat speculative schemes, aided by dishonest bank and trust company officials, so that when the resultant money stringency began to be felt, the disregard of the law by bank officials and the condition of things revealed by the investigation of New York Public Utilities, caused loss of confidence and extensive withdrawals of money from the banks by the public, entailing immense losses on legitimate manufacturing and business interests.

"So far as manufacturing jewelers are concerned, the panic in October caught them with stock at the maximum, all ready for the holiday trade, and with heavy liabilities for borrowed money. The great shrinkage in sales has forced them to carry over stocks of merchandise far above the normal amount. To this add the very limited demand for goods since, and the reason why it is impossible to run factories at more than one-half capacity is at once apparent."

Many other manufacturing jewelers have written in substantially the same strain as the immediately foregoing letter, and one of them gives figures which may be regarded as fairly illustrating the extent to which the entire trade was affected by the depression. The data relating to sales are as follows: October, 1907, sales, \$5,400; November, 1907, sales, \$1,900; and December, 1907, which should have been the best month of the year, \$900.

123. FANCY METAL GOODS:—"The financial troubles and industrial depression, which began last Fall, appear to us to have been the natural result of the high pressure at which business had been carried on for the past

few years, together with the loss of confidence resulting from the series of disclosures commencing with the insurance investigation in New York City, and culminating in the Metropolitan traction disclosures; the closing of the Knickerbocker Trust Co., and other financial institutions. The closing of these large trust companies and banks, and exposures of dishonest officials in high places in the business world, naturally frightened investors, both large and small, and the resulting panic and withdrawal of funds from banking institutions was the natural sequence and cause of the financial trouble."

124. SHEET METAL GOODS:—"The hoarding of cash by banks and individuals following the disclosures of reckless financiering in the case of the Knickerbocker Trust Co., of New York, and various other financial institutions in that city. This condition resulted in the withdrawal from circulation of a very large quantity of money, thus preventing legitimate business concerns from enjoying their usual and indispensable bank accommodations. Payments were very slow in consequence, with but little discounting, and curtailment of orders naturally followed. There is at the present time (April), a general improvement, but a feeling is generally prevalent in business circles that affairs will not show conditions of normal activity until after the Presidential election."

125. SHEET METAL:—"The action of the New York banks and trust companies in loaning the people's money to favored gamblers on all sorts of wild cat securities instead of to legitimate industries. The loss of confidence on the part of the people, caused by disclosures in insurance, railroad and other investigations, and the hostility of the financial magnates to the National administration for its interference in business affairs."

126. SILK GOODS:—"The immediate cause of the panic was loss of confidence caused by revelations of crookedness among the heads of some of the leading banks in New York City; a deeply-rooted and general feeling of distrust followed these disclosures and quickly spread to all the leading financial and commercial centers of the country, causing widespread depression, which still prevails in all branches of trade."

127. SILK AND COTTON GOODS:—"We attribute the financial trouble to the people who drew money from the banks and hoarded it in their homes, thus taking funds out of circulation. We believe in thorough investigation of financial institutions whenever there is any suspicion of improper or unlawful transactions on their part, and believe that had the public remained calm only good could have resulted from these investigations. To sum up our opinion in a few words, the public, by reason of its lack of self-control, is responsible for the present bad times."

128. LEATHER MANUFACTURE:—"Lost confidence in the financial strength of the banking and business community was the principal cause of the de-

pression. Money was withdrawn from the ordinary channels of trade which made it difficult and in some cases impossible to secure sufficient funds for manufacturing and other business purposes, thus seriously impairing the credit of many firms."

129. LEATHER MANUFACTURE:—"Over-trading generally without sufficient capital; over-issue of stock by corporations; loss of confidence in the soundness of banks and the ill-considered and untimely speeches of the national executive, which frightened people generally and impelled them to draw their money from the banks and hoard it away."

130. LEATHER NOVELTIES:—"Our opinion of the cause of the financial trouble is that it is due to the dishonesty of the large manipulators of stock, or, to quote the President of the United States, the 'successful dishonesty' of certain members of the money class, causing uneasiness and doubt among the middle and poorer classes, using these terms in a financial sense to such an extent that they, for self-protection, withdrew their savings from general circulation."

131. FOUNDRY:—"We look upon the present state of things as in part, at least, the natural outcome of the extraordinarily active condition of business during the past three years. Such conditions are almost sure to result in over-expansion in order to keep up with growing demand, and almost invariably when business begins to fall off, which it must do in time, everybody tries to realize at once—that is to say, each one concerned adopts the policy which he regards as best for himself, and the crash comes with all its attendant disasters. There was an easing up in business at least as early as July, 1907, but it escaped general notice, because all factories had orders far ahead of their capacity; they were, however, beginning to catch up with back orders, showing that there was a slowing up in the demand.

"Naturally the bank and trust company failures in New York had a very large share of influence in bringing about the present unfortunate condition of business, and the fact that bankers refuse to extend ordinary credits has thus far prevented a return to normal activity. The interdependent chain that, in a healthy condition of trade, keeps matters running smoothly, was disrupted by the fact that the various interests constituting its links sought safety in their own way. To lessen their risks, jobbers and dealers reduced stock on hand by cancelling orders for goods already placed, thus reducing the manufacturer to a choice between laying off his workmen or sinking for an indefinite period such capital and credit as he might be able to command in an accumulation of stock that might, under the altered conditions of reviving trade, have to be sold at a loss. Most of the manufacturers—particularly the smaller ones—could not do otherwise than adopt the first alternative, and so the purchasing power of the very people whose needs and necessities are the factors that sustain business of every description was, for the time being, absolutely paralyzed."

132. FOUNDRY:—"Contention among large financiers which ended in loss of confidence and caused the withdrawal of money from trade channels, resulting in curtailment of business, as money could not be obtained to meet pay rolls or carry on enterprises except at prohibitive interest."

133. FOUNDRY:—"Lack of confidence caused by over-speculation and the exposure of reckless financing by life insurance companies, banks, railroads and other corporations."

134. DROP FORGINGS:—"In our judgment the present state of things is the result of: Attacks on capital and corporations, beginning high up and permeating the masses, producing a feeling of uncertainty and danger on the part of every man who had saved or invested money. We regarded this result of the present development of socialistic principles and antagonism to all aggregations of capital, regardless of what they have done for the community, as marking the most critical period in the development and permanency of free government yet reached by our people."

135. CARRIAGE LAMPS:—"The financial trouble, I believe, was caused by investigations of several large corporations which disclosed a state of things that should never have been allowed, such as the use of funds under their care by officers and directors for private gain. This state of affairs led people to withdraw their money from the banks and hoard it up in places that they considered safe."

136. OAKUM:—"Lack of confidence caused by exposures of rankly dishonest management of corporations, such as banks, life insurance companies and the realization that many men who had been held up as models of everything good were nothing more than mere thieves destroyed all confidence and brought on the trouble. The official who turned on the searchlight was not responsible for what it disclosed."

Carrying Large Business on Insufficient Capital.

137. LITHOGRAPH:—"The panic and industrial depression are, in my opinion, due to the following causes, viz.: We had, in the matter of manufacturing industry, reached the culmination in the manufacturing world of a period of over-extension, together with an unwarranted and unnecessary increase in prices, which brought about a serious disparity between the prices of commodities and the purchasing power of wage-earners, which called for correction.

"Simultaneously the entire financial world suffered from over-extension of speculation which had reached its climax and could go no further. Just at this juncture when the demand for currency was the heaviest the financial sharps, anticipating trouble, began to hoard it away in their vaults, thereby reducing the supply and accelerating the crisis, which might have

been avoided by a gradual retrenchment and return to safe conditions, which would have prevented the universal slaughter of values that has taken place."

138. WOOLENS AND WORSTEDS:—"The cause of the financial trouble in our opinion was the expansion of business beyond the limits of prudent credit and consequent lack of currency to continue the enormous production with still greater expansion in contemplation.

"These troubles were greatly intensified by adverse State legislation affecting corporations, and the hostile attitude of the National administration."

139. COTTON WARP WOOLENS:—"Over-extension of credits. Too many trying to do too much business with insufficient capital. The sweeping denunciations of corporations and rich men by the President helped to spread among our people the impression that instead of only a comparatively few tainted concerns and individuals, all were bad. This powerful influence, supplemented by the attacks of State legislatures on railroads, and the absurd penalties inflicted on them and other commercial and industrial corporations, precipitated the trouble perhaps a year ahead of time."

140. WORSTED YARNS:—"It is our opinion, and has been for some time before the money stringency set in, that business of all kinds was on a highly inflated plane, and that it was only a question of time when there would have to be an easing up in production, and return to more nearly normal proportions, as the feverish activity in all lines of trade could not continue indefinitely.

"We were fortunately in the position of having taken some large contracts just before the money stringency was generally felt, and our customers having stood up to their contracts, we have so far felt little effects of the stringency, except in that we have, since its beginning, taken in very little new business. We are, however, getting nearer the completion of our orders, when we shall feel the effects of a shortage of new business. In addition to this, we are handicapped by the enforcement of the fifty-five hour law which places us in a very awkward position, as every pound of our products is sold outside of the State, which brings us into unfair competition in our neighboring States of New York and Pennsylvania, where factories are run sixty hours per week.

"We have explained to our employes that we are compelled to go on the fifty-five hour basis by the action of the State Department of Labor, and not of own volition, as the contracts on hand and the quick deliveries required would warrant our continuing on the sixty hour basis for some time to come.

"The strict enforcement of the present factory laws, in so far as our line of manufacture is concerned, will, in our opinion, seriously impair the prestige of New Jersey as a manufacturing State; we know of nothing we can do to overcome this difference in hours, with all our fixed charges just the same as before."

141. LEATHER:—"Over-expansion of bank credits in all lines, but largely and chiefly in speculative operations in the stock markets, following shortly after the destruction of great amounts of capital and property by wars, earthquakes and fires, and greatly aggravated by the exposure of corrupt methods of administration of fiduciary corporations and the enforcement of heavy penalties therefor."

142. FOUNDRY:—"Trying to carry too much business on the amount of money in circulation. Too much speculation of the 'get rich quick' order. Bad and questionable methods of business account more for the trouble than all other causes."

143. FOUNDRY:—"Undoubtedly there was too much business being done on credit, notably in New York City, where proper precautions were not taken by the banks. Here in Newark the financial situation was never bad, consequently most manufacturers have suffered less from scarcity of money than by the almost total cessation of orders. What we all want is orders."

144. PIG IRON:—"In the writer's opinion a combination of circumstances was responsible for the financial panic, chief among which was the fact that much more business was being attempted than could be safely taken care of by the aggregate capital of the country. There was therefore of necessity an undue expansion of credits, and a resort to all sorts of financial make-shifts for the purpose of keeping things moving. These finally were exhausted, and judgment day came when the books had to be closed and accounts balanced, as has happened in our business experience with a fair degree of regularity every ten or fifteen years. The cry of distress that followed caused fear and distrust throughout the business world, and innocent and guilty alike followed the one guiding impulse of self preservation, with confusion and panic as the natural and inevitable result.

"Matters were hastened by the sudden awakening of the people to the dishonest practices of men high in the financial and business world; these revelations of turpitude on the part of men who had been regarded as of spotless honor, and for the time being, utterly destroyed public confidence.

"Good times will return with the restoration of confidence and not before. When we emerge from our troubles, we shall be better off than before; the lessons we have learned and the experiences we have had will leave impressions not easily forgotten."

145. FOUNDRY:—"Over-capitalization and undermining of confidence due to exposure of corporate mismanagement by men heretofore held in high esteem."

146. GLASS MACHINERY:—"In regard to the cause of the industrial depression, my opinion is that, viewed broadly, the business machinery of the country was being run under too high pressure, with the safety valve

tied down, the fireman shoveling in coal and poking up the fire, and the engineer looking back to see how far he had come, instead of ahead to see what was in the way. Wages too high; living too high; building and other material too high, and too many wild cat schemes. Only one result could follow; things could not go higher, and there had to be a sudden stop, followed by a gradual return to more reasonable prices for material and wages, and more reasonable profits on invested capital. The exact obstruction that derailed the engine does not matter; that it would strike something while running at such reckless speed was certain. If not, and it continued a little further, an explosion of the boiler would have resulted in even a worse wreck."

147. MACHINERY:—"In my opinion the financial trouble was caused by the excessive use of promissory paper in business. A great many manufacturers were incurring grave risks in trying to do too much business on the amount of actual capital invested. The prices of material and products have advanced forty per cent. through the shorter working hours of the labor unions. We cannot compete in foreign markets where labor is cheaper and working hours longer."

148. ELECTRIC MOTORS:—"Too great an expansion of credits and too sudden a contraction of the same, accompanied by fears of the future, apprehension regarding banking accommodations, the whole accentuated by a feeling of uncertainty as to the stability of the general industrial situation."

149. ELECTRIC LAMPS:—"I believe the chief cause of the present financial trouble is due to the fact that people—business men and others—have gone too heavily in debt. Men have spent in various ways money that should have been kept for business. Another cause is that impractical men like the President of the United States and the Governor of New York are trying to regulate the business affairs of the country."

150. LAMPS FOR RAILROAD CARS:—"It seems to us that present conditions are due to the fact that credits were extended far beyond reasonable limits, and that too large a business was attempted upon the actual amount of capital invested; also that there has been a definite plan inaugurated and carried through certain localities to discredit the influences at work to restrict over capitalization and to bring about a higher moral standard of business dealings.

"We believe that some financial depression was bound to result in time from the first general cause, and that in addition thereto there has been a clear purpose to restrain, for selfish reasons, the influences working for better morals in business matters."

151. SILK GOODS:—"The cause of the financial trouble was, in our opinion, a general and long continued over-extension of credit and over-strain of existing capital and resources, which inevitably had to give way

sooner or later. In its commencement, a perfectly natural reaction, but aggravated by the American characteristic of overdoing things, that is to say, being pessimistic when business began to decline, and unduly optimistic when prosperity was at its height. The administration policy regarding corporations, trusts, etc., has been a contributory cause only in so far as it was interpreted generally, and in many cases misinterpreted, by the interested parties themselves. The actual currency famine and the hoarding of money all over the country was the result of an unaccountably insane and rapidly spreading fright, only comparable with the stampede of a herd of cattle."

152. SILK GOODS:—"Our opinion is the business had expanded beyond legitimate limits; credits were extended beyond the limits of safety; materials were high, and when the demand for goods fell off and prices began to recede, people became frightened and would not buy, so that the panic, once started, increased with each accession of fear, or business failure. Lack of currency seems to us to have been the least important of the contributory causes."

Wall Street Manipulation and Speculation.

153. SILK GOODS:—"The business troubles were, in my judgment, caused by fictitious values imparted to stocks and securities by Wall Street manipulation, and the people's discovery through insurance, bank and railway investigations, of the true character of such property and the fraudulent means resorted to in some instances to bolster up its fictitious value. Loss of confidence, with the withdrawal of capital, followed inevitably, and naturally the panic ensued."

154. SILK GOODS:—"In our opinion, Wall Street, with its illegitimate business methods, is the source of all great disturbance in the business and financial affairs of this country."

155. SILK GOODS:—"Over-speculation and lack of confidence in men connected with Wall Street and its methods of business."

156. CUT GLASS:—"We firmly believe that the panic was brought on by dishonest men in high positions who used and manipulated the finances of the country for their own selfish and dishonest purposes. Wall Street stock gambling was largely responsible. Wild speculation in stocks absorbed millions of the people's money without any return whatever.

"We believe there should be laws making it a criminal offence to offer for sale that which does not represent actual assets in proportion to the price for which it is sold."

157. GLASS TABLE WARE:—"We consider this financial trouble is due, first, to the few persons who control the finances of this country. Second,

to reckless stock dealings in Wall Street, that in many ways affected the financial world, either directly through actual relation to its transactions, or indirectly because of fear of what trouble and difficulty these might bring about, thus causing the calling in of loans and the withdrawal of capital from the banks."

158. TRUCKS:—"In our opinion the cause of the money stringency was due to the banks not standing back of the manufacturers, but instead, loaning their money in Wall Street on the prospect of larger returns in speculative deals. We feel that the entire responsibility rests on the stock gambling practices of Wall Street, where a prohibitive and and illegal rate of interest is offered, to draw money from the legitimate channels of business. We firmly believe now, that had the banks performed their part and looked out for the manufacturers, there would have been no trouble, and business would now be moving as smoothly as ever."

159. SHOE LASTS:—"Bank troubles in New York City, in combination with bear operations on stock exchanges, furthered by giving out pessimistic articles by newspapers, which taken together caused a widespread lack of confidence in the stability of prices."

160. CHEMICALS:—"Nervousness and loss of confidence occasioned by the inevitable shrinkage of investment values. Wall Street values were, and generally are, fictitious. Prosperity put money in the hands of a great many people who never before had any surplus money to invest, and who, without previous experience, accepted Wall Street valuations as real and true. Stocks dropped to their real values, and the investors lost the difference. Investments were at once withdrawn, and the remnants of fortunes were locked up where they would be safe temporarily, although earning nothing, but business lost the use of the money, and consequently trade stopped."

161. RUBBER:—"In our opinion the money stringency was brought on by several cumulative and concurrent causes. 1. Over-extension of credits. 2. Over-inflation of values. 3. The dishonest management of many financial institutions, and the illegal manipulation of funds by their officers, and by Wall Street financiers. 4. The proven lack of personal integrity on the part of many leaders of the financial world, heads of great railroad systems and other corporations, evidence of which had been coming to the knowledge of the public for several years through the efforts of President Roosevelt, thus shaking confidence at first, and finally causing a feeling of distrust among the public at large. 5. Ulterior plotting and planning of the great money powers of the country aimed toward bringing about this financial depression as an objective lesson to the President of the Republic, and such honest politicians as advocated reform, as well as the public at large. We will not undertake to indicate the relative importance of these causes in bringing about the general result."

162. OIL CLOTH:—"In our opinion all forms of business were being conducted under forced draught. Raw material advanced too rapidly, stimulating a false demand. When the banks began to clear out their wild cat securities, money was held back, and business men for want of funds were obliged to stop buying. Business fell off, and liquidation set in. Money conditions are now all right; when raw material strikes bottom and the Presidential election is over, business will be as good as ever, but on a much sounder foundation. It will not hurt the country to move for a few years on a more conservative basis all along the line."

163. CLAY MINING:—"I believe the trouble to have been largely caused by the greatly increased cost of labor and material of almost every description. Workmen were also much less regular and efficient than before unions were established, which makes the cost of labor much greater than the increased wages would indicate. I found it impossible to secure a sufficient advance in prices to cover increased cost of production; consequently the business of 1907, although far greater in volume, was less profitable than that of previous years. The high interest rates and difficulty of obtaining loans from banks also contributed to bring on the trouble.

"Many establishments were trying to do more business than their capital warranted, and when unable longer to borrow, were obliged to suspend or greatly curtail operations."

164. WOOLEN GOODS:—"The writer believes that present disturbances have occurred at a later date, but were hastened by the money stringency. Believe further that the cause was intense over-speculation in all kinds of stocks and lines of business which brought about extremely high prices for raw material and labor. We had reached the limit of prices beyond which manufactured articles cannot be bought or sold at a profit, and consequently there had to be a general and thorough readjustment of values."

165. WORSTED YARNS:—"Excessively high prices prevailing for material and labor—the latter in increased wages, lessened hours, and greatly diminished efficiency, causing a large and steady increase in the amount of money required to finance all kinds of undertakings, public and private. Because of this condition of things, the large and small banks were obliged to adopt a cautious course, thereby restricting the loaning of funds, the demand for which necessarily increased with the increased expensiveness referred to above. The banks were compelled to adopt this course in order to prepare themselves to meet a probable 'slump' in trade.

"The naturally pessimistic feeling which prevailed among investors, caused by the iniquitous laws enacted by many of the State legislatures against the railroad and other corporations, also had its effect. All these troubles were intensified by the attitude of the National administration toward great corporate enterprises, which caused a hundred times more suffering to the innocent than to the guilty."

166. SEARCHLIGHTS:—"We believe the financial trouble was simply the natural outcome of conditions that have existed during the past four or five years, owing to the fact that business had expanded at a rate out of all proportion to the reserve capital of the country as a whole.

"We believe that in addition to the general extravagance of all wage earners during the period of activity, the great reduction in the individual efficiency of workers in every class had much to do with the final collapse. Believing that there was no necessity for making an effort to retain employment on personal merit, the output of the individual workman has steadily declined during the past few years until it is now barely fifty per cent. of the standard maintained previous to the advent of trades unionism. This, together with the reductions in working hours, greatly impairs the productive capacity of the entire country.

"While extravagant living increased consumption per capita by a large percentage, the tremendous reduction in the amount of wealth produced per individual inevitably resulted in the depletion of the reserve capital of money and things.

"The country would quickly recover from present conditions were production maintained at a maximum even to the point of apparent over-production, and living expenses cut down. This would mean a large reduction in wages of all sorts, and steady employment for those at present unemployed. The unions and workmen generally, however, seem to prefer idleness to accepting this proposition."

167. METAL BUTTONS:—"The scarcity of money in proportion to the volume of trade being done, was only the means whereby trouble that had long been accumulating was brought to a head. The unreasonable rise in the cost of all kinds of material and also of labor would of themselves have brought industry to a standstill before long, because of the continual increase in prices which would soon have overrun the ability of the people to pay, if the manufacturer was to stand any chance of getting even a small profit out of his goods.

"During the time of prosperity, labor was scarce, high priced, and to a large extent, insubordinate and inefficient."

168. BRONZES:—"Broadly received, the present industrial troubles are the inevitable results of extravagance in living; wasteful business methods; and an indisposition on the part of workmen to give in return for the compensation received, an equivalent quantity of work."

169. ARTIFICIAL LEATHER:—"Labor demands such excessive wages that the cost of material has rapidly advanced. We think, however, that the present labor agitation in Washington is doing more toward keeping business down than any other influence known to us. Prices of practically all kinds of merchandise and manufactured goods have fallen off; the only element in production that seems not to have come down is the wages of labor, which must submit to readjustment before a resumption of business on a healthy basis can be brought about."

170. CHILDREN'S SHOES:—"The cost of material and labor had reached a point so nearly prohibitive, that it was impossible to buy, produce, or consume at a profit. Many manufacturers therefore had no incentive to try to maintain values, or to continue the production of goods, and therefore made no serious effort to do either."

Bad Currency Laws; Insufficiency of Currency.

171. GAS FURNACES:—"Undeserved credits extended to unsound enterprises, especially consolidations which increased corporate stocks without regard to actual value of assets. The disposition to capitalize possible future earnings. The bursting of several bubbles in October, 1907, by the compulsory withdrawal of bank support from speculation. A poor currency system, incapable of serving legitimate business in an emergency created by speculative non-producers. The bad example of riches piled up by speculators and promoters, leading to looseness in business methods generally."

172. STEEL WRITING PENS:—"The solid assets of the country increased out of proportion to the liquid assets. In other words, wealth producers brought more property into being than the money of the country would take care of. We should have a much larger volume in circulation. It is often stated that the circulation per capita was a great deal more than ever before, and so it should be because of the volume of business in the country being greater than ever before. While by far the largest part of this is carried on by merely swapping checks, the fact that practically every one worthy of employment was working, meant that a great deal more actual cash was required than formerly, and each person had a larger amount in his pockets than would be natural in dull times when men were out of employment. This soon used up the surplus cash and we should have had more of it to keep the business of the country moving."

173. PAPER BOXES:—"Inflated values forced upward by manipulation; insufficient currency to keep pace with abnormal increase of loans on such inflated values, so that the banks were unable to provide the funds required for moving the crops, and for meeting the ordinary requirements of manufacturing industry. Suspensions of large financial institutions, followed by mistrust and withdrawal of money by depositors.

"A further cause of the trouble was government action in exposing the unlawful practices of certain powerful corporations—railroad and others—and the determination of these interests to retaliate by endeavoring to discredit the government in every possible way."

174. PAPER:—"We attribute the business depression to the financial stringency, and the financial stringency to the locking up of liquid capital in fixed investments, such as railroads, steam and electric; factories. public improvements, renewals and extensions of loans, etc. We believe that the

revelations made from time to time during the past few years of unprincipled speculation and mismanagement in insurance circles, together with other evidences of abuses of trusts, had a cumulative influence in bringing on present troubles. The radical and incisive methods of the National and State government in dealing with corporation interests, destroyed confidence and created a general feeling of alarm, which resulted in a desire on the part of many to convert all kinds of property into the most convenient and desirable form of asset—money. The effort to do this with credits extended in many forms of fixed enterprises, as referred to above, precipitated the financial crisis."

175. AGRICULTURAL CHEMICALS:—"In my opinion the National executive is largely responsible for the distrust which was the basis of the trouble, as by ill advised and persistent talk he did, in my opinion, precipitate a condition that might have been avoided. I believe that he should have taken counsel with those who knew more about such matters than he; but the action of the Executive was not the primary cause. His 'policies' have now become merely an incident in history. The fault lies deeper than any one man. The country is trying to do business on the present day scale with an antiquated financial system that never was the best. In brief, I am of the opinion that our present system of currency is the cause, not alone perhaps, but primarily, the cause of the trouble.

"The commercial business of the country is a very sensitive quantity, and this can readily be understood when it is remembered that confidence is the cornerstone and credit is the natural and necessary element for successful business."

176. METAL REFINING:—"The causes of the trouble are: Over-extension of producing activity; withdrawal of banking credits from merchants, manufacturers, builders, etc., precipitated by abuse of credits and misuse of bank funds by their own directors and favored customers; inadequacy of our currency laws, and, more than all, the lack of a central bank of discount, such as exists in European countries, and by the operation of which the merchant is not entirely dependent upon the banks or those who control them."

177. MACHINERY:—"The causes appear to be many, a few of them being, we believe, an inflexible currency system, unreasonable demands of organized labor, and sensational attacks on railroads and other corporate interests."

178. LIME AND CEMENT:—"It is my opinion that the panic was caused primarily by the absorption of liquid capital into fixed capitalized enterprises, not only in the United States, but in all the large commercial countries of the world. The panic was immediately brought on by lack of confidence due to the sudden realization of this fact by many people who were not before unprepared to meet it.

"The utterly inefficient currency and banking system of the United States, which creates alternately excessive periods of currency stringency and redundancy, contributed to the severity of the collapse, and finally, a general lack of confidence in the honesty and good faith of the comparatively few men who, as corporate trustess, exercise so large an influence on our commercial, manufacturing and transportation interests, also I believe, contributed to the general collapse."

"The attempt of the National administration to control corporations aroused more or less dissatisfaction and distrust. Before the time arrives when just and adequate control shall be established over corporations, we may expect some disagreeable experiences. Many of the measures directed to that end will continue to be mistaken and uneconomic, however well intentioned. The establishment of a modern currency and banking system based upon commercial assets instead of bond security, is, in my judgment, one of the most effective correctives which can now be applied.

"The real difficulty, however, is to be found in causes much less subject to remedial measures, than the correction of the banking and currency system."

179. AGRICULTURE IMPLEMENTS:—"We do not believe that the financial trouble was caused by the attitude of the administration toward corporations, or by stock operations in Wall street, although these may have had some effect. We hold the opinion that the wonderful development of our country's resources by the ambition and energy of the American people simply outran the capital of the country. That the tremendous amount of business done during the past four or five years has been of a healthy nature is evidenced by the fact that the financial stringency has not been a business men's panic. We find all men of large business have the utmost confidence in the future; with most of them it is only a question of having capital enough to go on safely.

"Although last fiscal year (ending June 30th, 1907), was the best in our experience, we find at this writing (April, 1908), that our contracts, sales and shipments are even ahead of those of the same date for 1907, thus showing clearly that the American farmer is all right, and not at all scared."

180. REFINING PETROLEUM:—"We believe the cause of the financial trouble was: Universal distrust in all branches of business, including discredit at home and abroad of transportation and industrial companies, caused by the feeling, whether real or imaginary, that the hand of the State and Nation was against successful business enterprise, and the widespread condemnation of corporate prosperity, emanating from governmental sources, and widely advertised by both State and Nation."

181. FERTILIZERS:—"The system of finance under which the country has been operating many years, is worse than insufficient. With a system as good, or better than that of England, Germany or France, no two of

which are identical, this country would have escaped most of the trouble that has come from the financial disturbance.

"Of course when a structure is tottering, it requires only a very little push to bring about its fall. Our National executive gave several little pushes, which in our opinion should not have been given, and created trouble that could have been avoided.

"There is not an intelligent, fair minded person in the country who does not agree that there are grievous evils which should be remedied, but the remedies should be applied with care and not roughly. However, this country is too great and prosperous to be downed by any such condition, and it will end before long in our being in smooth water again."

182. PAINTS:—"America is a great and extraordinary country. Whatever she does, she does in a big way. No other country has ever done as many big and extraordinary things as she has. When she goes in for a panic its a good one; not a little flurry, not a little storm, but a good, stiff hurricane—one worthy of her vastness and her gigantic force.

"Big storms, while extremely severe at the time, don't last long. They usually leave some wreckage behind, it's true, but the worst is soon over. The clouds quickly pass and the sun shines for all once more, and we feel better for it and appreciate more fully the daily blessings we enjoy.

"The great financial hurricane that has swept across the land is over. It will take a little time to clear away the debris, but not long, for the wreckage has not been great, and the warm sun of prosperity will soon repair what damage has been done.

"Let me repeat, America is a great country, and always does big and extraordinary things—this is the proof of her genius; and just as the panic stunned us all with its fearful suddenness and frightful severity, I believe, now that it has passed, we will have an exhibition of the country's great stability and recuperative powers that will astonish the world as much as the panic did.

"It is idle to say there was no reason for the financial disturbance that has dislocated the trade of the country. It is senseless to blame any one man or any one thing for it.

"The truth of the matter is the country has been over-trading, by reason of too rapid expansion. The growth of business has been out of proportion to the increase in currency. There has been more business than money. The funds were not sufficient to go around, and the only way to make the money go around was to reduce the need of it, and that had to come through liquidation. Liquidation revealed the weak spots; then the crash came; confidence was shattered, and the universal mistrust that followed led to hoarding. Money, which lubricates the wheels of commerce, having dried up, the wheels had to stop.

"We have had two months of liquidation, and values are now down to a point where people are willing to take hold again. Money is slowly seeking its proper functions once more, and only requires to be encouraged to come forth in volumes. The great restorative is confidence, and confidence

can only be created by the exercise of sane and safe business methods. The big financial men of the country know this, and I believe all business will now be done on a sounder basis than ever before.

"Remember, this has been a money panic, not a hard times panic. We have suffered not from want of business, but from too much business. We have seen that too great prosperity can wreck trade, as it often does an individual; and he is a thoughtless business man who fails to learn the lesson.

"I can say for our company, we believe the worst is over. We believe there will be a steady progress toward complete recovery. Our belief is based on the fact that values are again down to reasonable figures and that there is now more money in the country than ever before.

"Our vast crops, the most valuable in the history of the country, are being marketed at high prices; our exports are growing in greater proportion to imports; and the balance of foreign trade is greatly in our favor. Confidence is rapidly being restored. The country is not only as sound as ever it was, but sounder.

"There can be no better proof of great stability of the nation than the splendid way in which it has come through the terrific storm that has swept over it. The genius of the American business has been equal to the strain, and it will be equal to the task of recovering from its effects.

"Its up to every patriotic, enterprising business man and concern to do their part in restoring confidence, by taking up once more in an active and intelligent manner the work that has been temporarily interrupted. This done, conditions will soon become normal, and that prosperity which we have long been accustomed to and which is the fair reward of energy and ability in a wonderfully productive land, will soon become general again and stir us to new and greater achievements.

"This company is going to do its part."

Unreliable Corporations and General Extravagance.

183. RUBBER GOODS:—"Cause of financial trouble was over-capitalization of corporations, causing distrust and finally panic among investors and people who had saved money. There seemed to have been no over-production of merchandise, for as a matter of fact the demand for more than a year back was greater than the supply. The remedy is to stop flooding the markets with securities of worthless corporations."

184. SPECIAL COTTON FABRICS:—"Over-production and over-purchasing by customers. Financial disturbances caused, we believe, partly by the above, and partly by bad currency laws, together with the efforts of powerful financial interests to discredit the policies of the administration."

185. VEHICLE WHEELS:—"Too much inflation as it were; everyone from the Nation down was extravagant. Too much credit given to stock companies with large capital but not of money. The cause of this extravagance

must be sought in the Civil War times, when people made money fast, but in thirty-three cent dollars, and acquired the habit of spending dollars of that value. When dollars increased in value to one hundred cents, we were not able to break ourselves—meaning the Nation, State, county, city, and so on down to the private individual, of the habit of continuing to spend them as freely as before.

"Our money system seems to be wrong when compared with that of England, France and Germany. When money is especially needed, our laws seem to increase the need and diminish the supply. When money is plentiful, our laws seem to diminish the demand and increase the supply."

186. ENGRAVING AND PRINTING:—"All financial disturbances seem to have three main features in common, that is to say: 1. Speculation. 2. The thing speculated in is an object of intense human desire or need. 3. It must be capable of being monopolized.

The present trouble, in my opinion, had its rise in speculation in privileges, of various forms, but of one essential nature. The writer is opposed to every variety of socialism, including the ownership, control or management of the machinery of production, and his belief is equally strong that no function of government should ever be administered, either wholly or in part, by private persons or corporations. Legalized monopoly in private hands should be made impossible. The corporation or person who has a special privilege or monopoly, has thereby a part of the government taxing power.

"Briefly stated, the genesis of the trouble looks to me like this:

"The weakness in our industrial system is at the point where the final consumer is dealt with—that is, in the affairs of retail merchants and small business concerns, like jobbing carpenters, masons, plumbers, and others who operate on a similar scale. The cause of this weakness lies in the fact that very few of them own the locations on which their business is carried on. Allowing that they have plenty of orders, their real prosperity depends upon the amount of rent and taxes they are called upon to pay. Most of them do business on such narrow margins that a slight increase in rent may mean loss instead of profit.

"Speculation in land makes the value of business locations unreasonably high, and the retail man renting from year to year, as many of them do, is forced to pay rent on this unnatural value. The evil is so widespread, and affects so large a proportion of those engaged in business, that industry is crippled to a serious extent in that the retailer's debt paying power becomes impaired, and business is interrupted because the wholesaler cannot collect his accounts. This condition reacts upon the manufacturer and farmer, whose employes together with those of the retailer and small tradesman constitute the greater part of the 'market' for goods. The loss of wages suspends for the time being the buying power of labor, and consequently every handler of the goods, from the retailer to the manufacturer and the farmer, must suffer more or less through the suspension. This cannot go on without something giving way sooner or later, and so, every boom is sure to end in panic

and depression. The spark that fires the powder is of various forms, but if the powder were not there, no explosion could occur.

"To sum up: Periodical panics and their succeeding business depressions are caused by land booms which impose unbearable burdens on business. Taxes on labor products add to the burden. When the business structure can stand no more, there is a breakdown, followed by stagnation for a time, and then begins the slow process of readjustment."

187. CUT GLASS:—"It seems certain that panics will occur about every ten years so long as we continue the present indirect method of taxation, that is, the taxing of everything in sight, as we do now. The only natural form of taxation is the taxing of land values. Land values should be taxed to their full rental values; this would supply enough revenue for all local, State and National purposes. Single taxers believe that panics are caused by the rise in land values, and consequently land rent is raised so high that the profits of many business concerns are absorbed in the rent. Everything that is produced by labor and capital should be free from taxation; this comprehends in a sentence the entire single tax idea.

"We think the tariff and other special privileges help to cause panics, because it gives the large capitalists an opportunity to charge more for their products than they should. In time this has a tendency to weaken the purchasing power to a point where would-be purchasers have no money to buy, and those who have the monopoly find themselves with a large stock on hand and no orders. It does not appear that money was the cause of the trouble; it seems to have been merely one of the results of the present system of taxation."

The Stoppage of Railroad Extension and Improvements

188. MACHINE TOOLS:—"We consider there were several causes for the financial trouble. We believe the business barometer of the steel and iron trades to be the demand of the railroads, and when they cease placing orders, these and practically all other industries are sure to be more or less seriously affected. The railroads discontinued purchasing equipment, making improvements, alterations, etc., because they found it practically impossible to borrow money except at exorbitant rates of interest. Their inability to borrow on more reasonable terms was probably caused to some extent by the continued prosperity and that amount of money already spent on improvements, additions, etc., to meet the great demand upon their facilities which arose during the past few years, had used up considerable of the surplus capital of the country that was subject to investment, and in some cases on account of lack of confidence in some of the railroads, because of the character of certain men identified with their management. The final crash was brought about by revelations of wrong doing on the part of some New York banks, which made people suspicious of them all, and led to the withdrawal of large amounts on deposit."

189. **HOT WATER CAR HEATERS:**—"The main trouble found in our business, which is entirely with railroads, is caused by these corporations curtailing expenses, not running their full number of passenger cars, about fifteen per cent. of which are idle; no repairs are being made, and practically no new cars are being built."

190. **STEEL ENAMELED CONDUITS:**—"Our products are used chiefly in new construction work. The money stringency caused a halt in new development, and the electrical jobbers through whom we market our goods curtailed their stocks. Our sales for a period from November 1st, 1906, were \$238,000 against only \$97,000 for the same period in 1907."

191. **MENS' HATS:**—"That the financial agitation is the direct cause of the panic seems clear for the following reasons: We learn from our business connections throughout the country that with scarcely an exception crops are very good and money plentiful; but because of the curtailment of railroad improvements and other large construction enterprises, so many wage earners have been thrown out of employment that business is almost paralyzed for the time being. The withholding of cotton by the Farmers' Alliance, of the South, and the ungenerous treatment of their clients by the banks, have been disturbing factors in that section. In our opinion these causes of discontent, intensified by too much sensational newspaper interference in business, has caused a degree of uneasiness and distrust resulting in a general disposition toward conservatism, which in its turn must be overcome before normal conditions are restored."

Other Views and Comments, Not Classifiable Under the Foregoing Headings.

192. **RAILROAD SWITCHES:**—"We believe that several causes contributed to bringing about the industrial depression, among them being: Extravagance of the people; dictatorial attitude of labor; too much agitation by the administration at Washington; corrupt management of money institutions. All of the above had a share of influence in bringing about distrust and alarm; the money was drawn from the banks and until confidence is restored it will not find its way back, and hard times will continue."

193. **CHAIN MANUFACTURE:**—"We believe that the causes leading up to the depression are of many kinds. In our opinion the primary cause is the universal extravagance of the public, from the millionaire to the working man. There seems to have gradually come over the people an impression that the unprecedented prosperity would last indefinitely, so that a large proportion of our people have been living away beyond their means. We believe that this view of the trouble and its causes is sustained by the result of the investigation of financial institutions in New York City. The bank directors, presidents, cashiers and clerks, were found to be living ex-

travagantly, and doing precisely what we believe to have been the primary cause of the depression. The aggressive attitude of the National administration, and the drastic legislation, State and National, enacted or proposed against corporations, had much to do with hastening the end toward which everything was tending."

194. MALLEABLE IRON:—"The recent bump to business, which only a few months ago seemed perfectly healthy and without a cloud upon its horizon, has cast a deep gloom over everything and makes the reality of the disastrous collapse very difficult to believe. When we look around to assure ourselves we are not laboring under some hallucination and seek information as to the cause of the sweeping disaster, what answers do we get? One captain of finance tells us that it is caused by our President; another that the Russo-Japanese War, coupled with the San Francisco earthquake is responsible; still another that it is caused by our non-elastic currency, or too fast living and over-speculation. Outside of these so-called experts, there is a distinct and self-satisfied cult who pretend to have examined the situation from every side, and after doing so declare that our form of government is entirely to blame, and the only reliable preventative against the recurrence of such troubles is—Socialism. These are only a few of the many current theories, and doubtless each of them has its own particular following, more or less numerous.

"An ordinary manufacturer pretending to no particular knowledge of the science of finance, but aiming to make honest goods and sell them at reasonable prices, is naturally disinclined to rush into a controversy for which he is not by his training especially fitted. Our suspicions or even our beliefs should not be given to the public as indisputable facts. Doubtless, there are many people who believe that the President, exercising his strictly constitutional rights, may have started trouble for those who have much to do with our financial system, and who, if so disposed, could, by combining, impede the free circulation of money, and bring about the condition of business stagnation that now confronts us; but the question to be answered is, have they or have they not been active in planning or abetting a conspiracy having such a purpose in view.

"The currency of the country was not destroyed by the Russo-Japanese War; neither was it swallowed up in the San Francisco earthquake. Living at too fast a pace did not consume it, and how Socialism can better matters, I fail to see.

"Panic or lack of confidence, it seems to me, had much to do with our troubles. In the face of trials, such as we have gone through, or are now going through, even the most careful and shrewd business men lose their judgment and act from fear or are swayed by impulse.

"Why should business have come so suddenly to a standstill? Farm crops, which are always the basis of our prosperity, were never more bountiful; the demand for factory products was greater than the supply, and there is not now the explanation of an overstocked market as there was in the industrial disturbances of former years.

"The writer has been through several panics from 1857 to the present time, and this one differs from them all in that there is no overstock of goods of any kind, and there is less debt than ever before in the history of the country.

"A bountiful harvest and an unsatisfied demand for manufactured articles will soon bring about a revival of business along conservative lines, if the quacks of finance will only permit matters to drift along in their natural order."

195. GLAZED KID:—"The financial trouble through which we have recently passed cannot, in our opinion, be attributed to any one cause. Probably the main reason may be laid to increased gold production, on account of which, in 1904, the value of money decreased very rapidly, and from the same date there was a constant increase in the value of merchandise due to this cheapening of money. If this equalization process had only continued until the value of merchandise was in exact relation to the value of money, the chances are that this acute crisis would not have come. It has always occurred that any rise in prices is overdone, and that reaction and liquidation must follow. This readjustment of the value of merchandise to that of money is going on to-day, and we think that within a few months business will again be normal.

"Besides these causes, the fact that we have enjoyed bountiful harvests for a great many years has also induced speculation of all kinds, which has tied up a great deal of liquid capital, thus in a measure helping to make money scarce for commercial and industrial purposes.

"The above in short are the reasons to which we attribute the hard times which we had, though political agitation has, no doubt, helped in a measure to shake public confidence. We would add, however, that in our judgment what has been done in Washington in regard to rebates and other unfair practices will ultimately be for the benefit of all."

196. HATTERS, FUR:—"There are two principal causes for the industrial depression, and these in my judgment are as follows:

"First: The railroads which gave so much employment were unable to borrow money at reasonable rates, and therefore were compelled to stop making improvements.

"About ten years ago, some financial people, foreseeing that the expansion of business would necessitate the finding of cheap money abroad, went to France (where I came from) and tried to induce the bankers there, who are the advisers of the investing class, to recommend the investment of money in railroad stocks and bonds; it required a few years to study the situation, and finally some issues of Pennsylvania and New York Central stocks were sold, and the plan to secure French capital was in a fair way to becoming successful, when the governmental attacks on the railroads and the prejudice aroused against them thereby, created distrust in the minds of foreign investors which it will take years to remove.

"Second: While in Europe, in 1907, the writer had an interview with the head of a large banking institution whose specialty it is to finance industry and commerce, in the course of which, while commenting on the industrial situation in the United States, he said that the present prices of raw material and other expenses of manufacture were entirely too high here, and that bankers and money lenders, bound as they were by the established legal rate of interest, incurred a risk out of proportion to the prospects of profit in lending money under these circumstances. No reasonable assurance could be given that the manufacturer would succeed in selling his goods at a profit; if he did so, his notes would be paid, and both the bank and himself would earn a profit, but if not, it is quite probable that the major part of the loss would fall upon the bank. With a fixed legal rate of interest on money, and no authority to adjust the same to the risk incurred, the only safe policy for the banks to pursue is to be cautious in making loans, restricting them to such enterprises only, as seem reasonably sure of being profitable.

"It has since seemed to the writer that our banks, in limiting discounts or refusing them altogether, were largely influenced by the same consideration."

197. LEATHER MANUFACTURE:—"The cause of our trouble appears to be the scarcity of money, as it is very evident that the country is as rich in natural resources as it has ever been; the question then is—where has the money gone. The large sums spent by the railroads for improvements amounting to many hundreds of millions of dollars can scarcely affect the situation, for all this money was expended for labor in one or another form, and should have gone back into circulation unless hoarded away or sent out of the country.

"There are reasons for believing that of the wages paid to the hundreds of thousands of foreign laborers in the construction of buildings, railroads, etc., during the past seven years, the greater part has not gone into circulation, but is carried around in belts on the persons of these workmen, or has gone to their old homes in Europe.

"If newspaper reports concerning the large amounts of money taken from this country to Europe and left there in the form of charities, homes, living establishments or the purchase of art objects, by well-known individuals, families, and the thousands of tourists who spend two-thirds of their time, and even a greater proportion of their incomes, abroad are true that is another large channel through which our money is steadily flowing to Europe and other parts of the world. The revenues of the largest of all American family estates have flown for years to England, where the self-expatriated owner has taken up his abode. If it were possible to ascertain the amount of money left in Europe during the past eight or ten years, the aggregate amount would be found to be surprisingly large.

"The writer believes that a large proportion of the merchants, manufacturers, and men connected with banking institutions, have been spending more than their earnings; that is to say, they have been spending anticipated

profits or revenues, based on high or inflated valuations, and a large proportion of the money has been wasted upon luxuries."

198. MECHANICAL RUBBER GOODS:—"The manner in which the confidence of investors has been imposed upon by Wall Street has shaken public confidence.

"A legitimate manufacturer must invest a large amount of money in real estate, machinery, fixtures, raw material and wages of labor before he can earn a dollar, and is satisfied at the end of the year if his business has paid his expenses, and shows a small profit; but a Wall Street broker has no money invested outside of office furniture and therefore incurs no risk. He lives on the 'fat of the land,' has the very best of everything, rides in his automobile, has his yacht and summer residence, and is looked up to and respected in the place where he lives, and does it all off other people's money. Stop the gambling in stocks of all kinds, and also the cornering of cotton, wheat, corn and other great staple articles of commerce and everybody, excepting only the brokers, will have more money."

199. SILK FINISHING MACHINERY:—"As is generally known, the financial troubles that have caused such a great disturbance to industry began in October, in New York City. It seems, however, to have had no effect on Paterson, as the mills and shops were busy, while New York and other places were in distress.

"Our line of work being mainly silk machinery, we did not feel the effects of the hard times to any great extent until the silk troubles began. The raising of the Japanese 'boycott' had a great deal to do with the undoing of the silk industry. Silk went away down in price, calculations failed, and several prominent silk houses began to totter. The banks also were hard up, not being able to furnish pay rolls and other necessary funds, and several large silk concerns failed. Big failures invariably cause the smaller manufacturers to shrink, and therefore there was a sudden falling off in business about January 1st.

"Beyond the matter of the Japanese 'boycott', which affected Paterson in a peculiar manner, the reasons for the trouble apparently are the same here as elsewhere, viz., lack of confidence in financial circles. Conditions about here are not improving very fast, although the difficulties with regard to currency have disappeared to a large extent."

200. HARDWARE SPECIALTIES:—"Thirty-five years experience in manufacturing in Newark does not discover to the writer anything new in present conditions.

"The primary cause of all our periods of depression is deserted farms and congested cities. In such periods very few competent workmen are discharged, and as a general rule, the unemployed are hardly worth employing. The efforts of the labor unions to improve upon the work of nature have not been successful thus far. All men are not equal, even if they do receive the same wages.

"We are now simply evening up, after two or three years of over-production, with conditions complicated by a banking system that affords opportunities to officials to loot their own banks."

201. AGRICULTURAL IMPLEMENTS:—"Answering your question as to the cause or causes of the money stringency, we desire to say that the question is a very difficult one to answer, and we doubt any one being able to answer it correctly. In our judgment many causes contributed to the trouble.

"Some time ago there seemed to be a surplus of money, which was apparently a drug on the market, and discounts were low. Business commenced to boom in all directions; railroads, manufacturers, and commercial enterprises generally commenced to expand, until by gradual stages this surplus was worked off and money commenced to be a scarce article. The railroads found it very hard to finance their large operations, and borrowers generally began to experience difficulty in meeting obligations. Coupled with this state of affairs was a general expectation that something was going to happen, which caused a widely prevalent feeling of unrest.

"The aggressive policy of the national administration perhaps, did not contribute to allay suspicion; indeed it was rather augmented thereby, and it only required some bad break or failure to begin a general tie-up.

"Our banking laws should provide for cohesion among the banks to stem and overcome such a panic. Each bank being for itself, each bank looked after itself, which contributed to making matters still worse. We fully believe, however, that no necessity exists just now for alarm. The demand for money is not as great now as it was prior to the panic. We believe that generally speaking, no new enterprises are now, or have been for some time planned, and that work wherever it could be stopped has already been suspended. This will ease money conditions very materially and contribute largely to restoring public confidence, but until we have a correct financial policy of a national character, we are apt to have a recurrence of this panic."

202. SHOE MANUFACTURE:—"The high tide of prosperity upon which the country was floating, and the natural extravagance engendered by it, was the primary cause of our present financial troubles. The desire to get rich quick and to have money to spend as freely as their apparently more prosperous neighbors, led men to forget the moral law and to take advantage of conditions under their control for the purpose of issuing all sorts of securities having intrinsically little or no value, thereby robbing the public and each other as opportunity afforded. The banks that loaned money on such securities were unable to realize on them when the panic came, and therefore had to suspend.

"The President of the United States, realizing the situation, and foreseeing the disasters that would follow if these conditions remained unchanged, began his campaign against vicious corporations, trust, and undesirable citizens. The public, on its part, with a vague idea that many things were wrong, became frightened and—the panic ensued. It was a

blue pill to a bilious people, and some time will be required for recovery; but, as was said on another memorable occasion of great national disaster, 'God reigneth and the government of the United States still lives.'"

The foregoing letters—202 in number—convey practically every shade of opinion expressed in the upwards of fourteen hundred more or less similar communications on the subject written by manufacturers in response to the Bureau's request.

These statements should receive a careful perusal, both because of the transcendent importance of the subject matter and the remarkably clear and forceful but at the same time temperate manner in which the views regarding the causes of the disaster are set forth. The opinions expressed are those of men trained in the management of large enterprises, and who are through long experience thoroughly acquainted with the many causes that disturb the stability of business.

The presentation ends with the following tables, in which the effect of the depression on the employment of labor and the volume of current business is given by industries, and another table showing the effects of the depression in the several counties separately.

THE MONEY STRINGENCY AND INDUSTRIAL DEPRESSION, 1907-08.
TABLE No. 1.—Effect on Employment.

INDUSTRIES.	Total Number of Establishments Reporting.	Month Indicated by the Greatest Number Reporting as the Time when the Depression Began.	Average Number of Wage-earners Employed Before the Depression.	Number of Establishments Reporting a Lay-off of Wage-earners.	Wage-earners Discharged or Laid Off Because of the Depression.	
					Number.	Per Cent.
Brewery products	12	November	565	3	38	6.7
Brick and terra cotta.....	55	October	9,466	23	3,173	33.5
Buttons (metal and pearl).....	12	November	756	6	196	25.9
Carpets and rugs.....	17	November	1,060	2	110	10.3
Carriages, wagons and trucks.....	27	December	1,531	12	905	59.1
Chemicals	20	November	3,720	8	712	19.1
Cigars and tobacco.....	22	"	7,096	9	363	5.1
Clay (mining)	2	"	105	1	12	11.4
Clay (masonry)	2	"	591	1	75	12.6
Confectionery	6	November	146	None.	None.	.....
Cooperage	4	November	6,950	17	1,163	16.8
Cotton goods	34	December	300	1	200	66.6
Cream separators	1	November	910	1	12	1.3
Cutlery	9	October	3,132	18	939	29.9
Electrical appliances	26	November	200	None.	None.	.....
Fertilizers	13	November	1,720	25	25	1.4
Food products	11	October	9,158	41	3,698	40.3
Foundry products (iron and brass).....	56	November	1,711	11	628	36.6
Furnaces, ranges and boilers.....	16	"	675	3	97	13.9
Furniture	5	"	9,832	11	2,022	20.4
Glass (window and bottle).....	22	"	1,691	2	3	0.2
Graphite products	4	October	1,769	15	225	18.3
Hardware specialties	23	November	4,896	9	553	11.4
Hats (men's)	21	"	1,322	8	406	26.6
Insulated wire and cables.....	10	October	3,821	45	946	24.6
Jewelry and watch cases.....	64	November	3,654	38	1,315	35.9
Leather	46	"	4,354	15	278	6.3
Leather products	43	"	665	2	127	19.0
Light, heat and power appliances.....	8	October	490	2	180	36.7
Lime, plaster and cement.....	4	"	14,923	71	6,683	44.7
Machinery (general and special).....	86	"	.....	.....	.....	.....

Mechanical tools, files and rasps.....	12	November	1,391	8	335	24
Men's clothing	10	"	1,111	3	125	11.2
Men's shirts	9	October	1,865	2	125	6.6
Metal novelties and sheet metal goods.....	49	"	5,588	34	1,281	22.9
Millwork (house trimmings)	19	December	941	13	393	41.7
Musical and scientific instruments.....	17	November	2,713	11	685	25.2
Oakum	2	"	170	1	10	5.8
Office cloth and linoleum.....	8	"	755	2	218	25.8
Paints, oils and varnishes.....	18	October	5,880	6	152	2.5
Paper	16	November	1,462	8	170	11.6
Paper boxes	21	"	1,280	10	217	16.9
Plumbers' hardware	3	"	198	2	64	22.2
Pottery products	7	November	847	4	151	22.5
Printing and bookbinding.....	18	"	1,275	5	117	9.1
Railway equipment	3	October	900	2	790	77.7
Rubber (hard and soft).....	18	November	2,602	16	1,071	41.1
Shipbuilding	9	"	960	5	265	21.3
Silk goods (broad and ribbon).....	89	October	17,025	51	3,849	23.1
Silk mill supplies.....	5	November	216	3	48	22.2
Smelting and refining precious metals.....	9	September	4,218	4	472	11.1
Steel forgings	13	October	2,332	8	899	38.5
Steel specialties	8	November	1,530	5	318	20.7
Structural steel and iron	7	"	1,070	6	495	46.2
Stone crushing	9	October	1,915	5	920	48.0
Window shades	2	November	645	2	122	18.9
Women's wear	24	"	4,313	8	314	7.2
Wooden goods	9	"	479	7	102	21.2
Worsted and woolen goods.....	20	"	6,008	14	916	15.2
Miscellaneous	26	"	2,303	13	374	16.2
Totals.....	1,114		108,871	642	40,181	23.8

THE MONEY STRINGENCY AND INDUSTRIAL DEPRESSION, 1907-08.

TABLE No. 2.—Effect on the Volume of Business.

INDUSTRIES.	Total Number of Establishments Reporting.	Condition of Trade just before the Depression. Number of Establishments Reporting it as			Percentage of Falling off in Orders due to and following the Depression.		
		Good.	Fair.	Bad.	Highest.	Lowest.	Average.
Brewery products	12	7	3	1	15	2	3
Brick and terra cotta	53	46	9		100	10	44
Buttons (metal and pearl)	12	6	6	1	70	25	38
Carpets and rugs	7	5		1	50	25	30
Carriages, wagons and trucks	30	16	2		100	10	32
Chemicals	27	23	2		50	5	14
Cigars and tobacco	22	16	6		90	5	21
Clay (mining)	2	2			80	50	65
Confectionery	6		1		50	50	50
Cooperage	4	4					
Cotton goods	34	26	6	2	85		35
Cream separators	1	1			50	50	50
Cutlery	9	9			85	25	37
Electrical appliances	26	20	5	1	90	15	40
Fertilizers	3	3	1		60		10
Food products	11	9	1		80	10	40
Foundry products (iron and brass)	56	48	4	1	100	20	55
Furnaces, ranges and boilers	16	16			50	30	35
Furniture	5	5			80	20	35
Glass (window and bottle)	22	16	4	1	50	33	37
Graphite products	4	4			50	10	43
Hardware specialties	23	20	1	1	100	5	35
Hats (men's)	21	17	4		100	10	42
Insulated wire and cables	10	8	1		75	10	51
Jewelry and watch cases	64	60	4	2	100	10	50
Leather	46	30	11	2	100	10	31
Leather products	43	37	4	1	100	10	24
Light, heat and power appliances	8	7	1		80	15	24
Lime, plaster and cement	4	3			50	25	31
Machinery (general and special)	86	80	5		100	10	53
Mechanics' tools, files and rasps	12	10	2		90	25	41
Men's clothing	10	8	2		100	5	31
Men's shirts	9	7	2		50	10	29
Metal novelties and sheet metal goods	49	37	7	1	100	10	37
Millwork (house trimmings)	19	16	2	1	95	10	28
Musical and scientific instruments	17	15	1		60	15	31
Oakum	2	2			35	35	35
Oilcloth and linoleum	3	2	1		50	40	45
Paints, oils and varnishes	18	18			50	10	15
Paper	16	12	3		75	15	35
Paper boxes	21	18		1	75	10	30
Plumbers' hardware	2	2	1		45	40	42
Pottery products	7	6	1		75	20	42
Printing and bookbinding	18	15	1	1	50	11	16
Railway equipment	3	2			90	80	85
Rubber (hard and soft)	18	18			100	33	51
Ship-building	9	8	1		100	20	45
Silk goods (broad and ribbon)	89	72	11	1	100	10	48
Silk mill supplies	5	3	2		75	30	31
Smelting and refining precious metals	9	7	1	1	50	25	29
Steel forgings	13	11	2		80	20	53
Steel specialties	8	8			70	20	31
Structural steel and iron	7	6	1		100	50	65
Stone crushing	0	8	1		100	35	48
Window shades	2	2			45	20	32
Women's wear	24	21	2		100	5	29
Wooden goods	9	9			90	35	45
Worsted and woolen goods	20	17	1	2	95	10	34
Miscellaneous	26	19	6		100	10	24
Totals and averages	1,114	927	133	20	74.4	19.7	38.4

THE MONEY STRINGENCY AND INDUSTRIAL DEPRESSION, 1907-08.
TABLE No. 3.—Effect on the Volume of Business.—Continued.

INDUSTRIES.	Total Number of Establishments Reporting.	Contracts Cancelled Because of the Depression.		Establishments Reporting Having Paid Premium for Currency.			
		Number of Establishments Reporting Cancellations.	Number of Contracts Cancelled.	Money Value of Cancelled Contracts.	Number so Reporting.	Highest Per Cent.	Lowest Per Cent.
Brewery products	12	None.	70	\$343,140	2	6	6
Brick and terra cotta	55	3	20	38,250	.....	.....	.....
Buttons (metal and pearl)	12	3	75	68,000	.....	.....	.....
Carpets and rugs	7	2	4	119,460	1	6	6
Carriages, wagons and trucks	20	1	5	4,000	.....	.....	.....
Chemicals	27	1	50	6,500	.....	.....	.....
Cigars and tobacco	22	None.	.....	.....	.....	.....	.....
Clay (mining)	2	2	100	60,000	.....	.....	.....
Confectionery	6	None.	.....	.....	.....	.....	.....
Cooperage	34	9	225	114,500	3	6	4
Cotton goods	3	None.	.....	.....	.....	.....	.....
Cream separators	1	None.	8	19,000	.....	.....	.....
Cutlery	6	3	24	60,300	.....	.....	.....
Electrical appliances	26	None.	.....	.....	.....	.....	.....
Fertilizers	3	2	2	42,700	.....	.....	.....
Food products	11	4	7	39,935	.....	.....	.....
Foundry products (iron and brass)	56	2	2	26,000	.....	.....	.....
Furnaces, ranges and boilers	16	None.	.....	.....	.....	.....	.....
Furniture	5	5	37	848,950	.....	.....	.....
Glass (window and bottle)	22	None.	.....	.....	.....	.....	.....
Graphite products	4	3	2,512	77,035	2	6	2
Hardware specialties	23	4	546	76,856	.....	.....	.....
Hats (men's)	21	4	10	1,500	.....	.....	.....
Insulated wire and cables	10	1	106	154,784	.....	.....	.....
Jewelry and watch cases	64	8	.....	1,980,590	2	8	3
Leather	46	6	52	57,425	1	1	1
Leather products	43	1	1	.....	.....	.....	.....
Light, heat and power appliances	8	None.	.....	.....	.....	.....	.....
Lime, plaster and cement	4	17	64	351,649	1	5	5
Machinery (general and special)	86	3	20	1,150	2	3.5	3
Mechanics' tools, files and rasps	12	.....	.....	.....	.....	.....	.....

THE MONEY STRINGENCY AND INDUSTRIAL DEPRESSION, 1907-08.
TABLE No. 3.—Effect on the Volume of Business.—Continued.

INDUSTRIES.	Total Number of Establishments Reporting.	Contracts Cancelled Because of Depression.			Establishments Reporting Having Paid Premium for Currency.			
		Number of Establishments Reporting Cancellations.	Number of Contracts Cancelled.	Money Value of Cancelled Contracts.	Number so Reported.	Highest Per Cent.	Lowest Per Cent.	Average Per Cent.
Men's clothing	10	1	2	41,500	1	6	6	6
Men's shirts	9	3	24	242,250	1	6	6	6
Metal novelties and sheet metal goods..	49	7	90	262,800	1	6	6	6
Millwork (house trimmings).....	19	1	1	100,000				
Musical and scientific instruments.....	17	3	15	51,000				
Oakum	2	None.						
Oilcloth and linoleum.....	3	1	15	500,000				
Paints, oils and varnishes.....	18	None.			1	4	4	4
Paper	16	2	100	10,200	1	5	5	5
Paper boxes	21	1	2	2,000	1	6	6	6
Plumbers' hardware	3	None.						
Pottery products	7	None.						
Printing and bookbinding.....	13	2	12	3,120				
Railway equipment	3	None.			1	2	2	2
Rubber (hard and soft).....	18	3	64	228,000				
Shipsbuilding	9	1	3	20,000				
Silk goods	89	24	197	1,612,100	2	3	2	2.5
Silk mill supplies	6	None.						
Smelting and refining precious metals..	3	3	6	13,000				
Steel forgings	13	3	35	117,500				
Steel specialties	8	3	60	256,000				
Structural steel and iron.....	7	None.						
Stone crushing	9	2	3	18,000				
Window shades	2	1	15	20,000				
Women's wear	24	4	3,837	122,420	2	6	4	5
Wooden goods	9	2	8	1,800				
Worsted and woolen goods.....	20	5	100	370,000				
Miscellaneous	26	3	15	23,000	2	4	3	3.5
Totals and averages.....	1,114	169	8,630	\$3,504,424	26	4.9	4.	4.3

THE MONEY STRINGENCY AND INDUSTRIAL DEPRESSION, 1907-08.
TABLE No. 4.—Presenting the Data of Tables Nos. 1, 2 and 3, by Counties.

COUNTIES.	Number of Establishments Reported.	Month in Which Money Stringency Was First Felt.	Average Number of Persons Ordinarily Employed.	Wage-earners Discharged because of Money Stringency.		Extent to Which Orders Fell Off—Per Cent.	Orders Cancelled after the Money Stringency Began.	Value.	Establishments Reporting Fall Prem-ium for Cur-rency.	
				Number.	Per Cent.				Number Re-ported.	Average Per Cent. Re-ported.
Atlantic	9	November	1,436	4	0.3	33.3		\$15,500	1	4
Bergen	30	October	3,780	324	9.8	98.4		38,140	1	6
Burlington	29	November	3,338	1,226	36.7	43.2		191,800	1	6
Camden	40	November	6,634	1,622	15.4	48.2		242,630		
Cape May	6	October	4,313	185	35.6	23.3		40,000	3	4.6
Cumberland	24	November	4,184	806	18.1	25.6		72,000	4	4.7
Essex	352	October	38,483	7,066	13.5	30.6		2,357,746		
Gloucester	11	November	2,768	827	23.8	22.1		331,700		
Hudson	155	October	33,192	6,419	19.3	35.3		1,730,500	3	3.4
Hunterdon	12	October	1,302	467	35.8	31.9		104,800		
Mercer	59	November	8,269	2,424	29.5	42.6		281,750	2	6
Middlesex	65	"	17,257	3,833	22.5	34.4		194,324	1	6
Monmouth	21	"	1,737	286	16.4	28.8		102,700		
Morris	22	December	3,314	589	17.7	47.9		57,000	1	3.5
Passaic	153	November	24,996	6,657	24.2	40.1	1,390	2,301,800	5	3.8
Salem	7	October	1,451	189	12.3	47.0		60,000		
Somerset	6	November	1,254	351	27.7	26.6		15,000	1	5
Sussex	7	October	1,167	262	22.4	29.7		69,394	3	3.3
Union	48	November	6,818	3,122	45.7	38.6		827		
Warren	19	"	7,443	4,223	56.7	41.3		207,500		
Totals and averages..	1,114	.....	168,571	40,181	23.8	35.5	8,630	\$8,504,424	26	4.4

The Legal Liability of Employers in the United States for Injury to their Employees.

The prevalent doctrine of employers' liability throughout the United States which has the English common law for its foundation is subject continually to change and modification by the rulings of our State and Federal courts, and also to a very large extent in New Jersey, and other manufacturing States, by statutes passed with a view to promote the general safety and welfare of workmen. The age at which children may be employed in factories has been limited; the number of hours constituting a day's labor in certain cases has been prescribed; laws to promote the settlement of industrial disputes by arbitration have been enacted; statutes for the preservation of the health of employes and safe-guarding them against accidents leading to injury or death are both explicit and numerous; the use of store orders in payment of wages has been forbidden, and wages are protected by mechanics' lien laws and made preferred debts in certain cases of insolvency. The greater number of these statutes have been beneficial, but others being passed to assuage some temporary grievance—real or fancied—have proved to be of little or no value. Factory owners are required, under certain mild penalties in the form of fines, to take certain precautions specified by law for guarding dangerous machinery, open hatchways, stairs, etc., but if notwithstanding these measures an accident does occur, the only remedy open to the injured employee is to bring suit for damages and have the same decided according to the principles of the common law as these have been evolved from the rulings of the higher courts of our State, modified hereafter of course by the provisions of Chapter 83, Sessions Laws of 1909, which bears the title "An act to regulate the liability of employers for injury or death to employes in certain cases," and which goes into effect on September 1, 1909. How far the legal rights of parties to such suits are to be affected by this act cannot be determined until some cases to which its provisions apply have been passed upon by the higher courts.

There is a marked difference in the interpretations of the common law in various jurisdictions, and certain applications of its principles for this reason are identified by name with the State in which they prevail.

Thirty-nine States of the Union have statutes defining employers' liability for accidents to employes, resulting in injury or death, and the rules laid down in these acts show as wide a variance from each other as do the many local interpretations of the common law. Some of these statutes amount to an almost complete abrogation of the common law, some modify the accepted interpretation of its most important features, and others in effect amount to a mere restatement of its long recognized principles. Almost all these statutes are drawn for the purpose of defining the boundaries

between the risks assumed by an injured employe and the obligation of the employer to prevent the existence of dangerous conditions; in other words, the object has been to substitute for the doctrine of "contributory negligence" with its possibilities of elastic interpretation, a more or less concrete definition of the same, adjusted to the understanding of the ordinary workmen, defining the measure of responsibility resting on employers and employes for accidents resulting in injury or death.

Liability laws of this character are found on the statute books of thirty-nine States of the Union, the United States and also Porto Rico. Although these statutes cover in the dates of their enactment a period of about thirty years, it can scarcely be said that the great volume of litigation that has arisen under them has effected results of a conclusive character so far as determining the boundaries between the risks assumed by the employe under the law, and the liability of the employer for unlawful negligence in permitting dangerous conditions to exist. As a rule, under these regulating statutes, the definitions of "reasonable care," "contributory negligence," "ordinary risks," etc., with other controlling propositions, are no more clearly defined than they were before the enactment of the liability laws, and the courts have therefore received but little help from them toward getting away from the common law view formerly prevalent, which favored the entire assumption of risk by the employe, while the movement for statutory regulation reflects the gradual growth of the doctrine that on the employer should devolve the duty of providing absolute protection to his employe from all risks and hazards not naturally inherent in the occupation in which he is engaged.

The statutory enactments of the various States have practically all recognized the doctrine of the employe's assumption of what are known as ordinary and unavoidable risks, but in spirit at least they are almost all against continuing as part of his already heavy burden of responsibility such consequences as may result from possible carelessness, ignorance or indifference on the part of the employer or his immediate representative.

New Jersey is one of the few States in which the relations of master and servant are still regulated solely by the principles of the common law, for although a beginning was made in statutory regulation of the same by the legislature of 1909, the act which was passed did not, as noted above, become operative until September 1st of the same year, and large numbers of cases now in various stages of litigation before the courts will be finally adjudicated without reference to its provisions. As no matter how this statute may be construed, the common law rights of an injured employe remain as they were before its enactment, and as it is probable that there may in the near future be a demand for more legislation on the subject, it seems proper to set forth briefly the most important principles of the common law as generally applied to the relations of master and servant, and also to present the statutory provisions of those States in which laws on the subject have been enacted.

This presentation seems all the more necessary for the reason that during the year immediately preceding the introduction of the employers' liability bill, which was enacted into law by the last session of the legislature, many

requests for information on the actual condition of the law in this and other States were addressed to this Bureau by various trade and labor unions, such as carpenters, bricklayers, railway trainmen and others employed in the occupations in which accidents resulting in injury or death are most numerous. Inquiries directed to the same end were also received from members of sociological associations, lawyers, insurance companies and others who for one or another reason were interested in the subject and desirous of securing a fuller measure of protection for workmen engaged in hazardous occupations than that afforded by the exclusively judge made law which had hitherto prevailed. During the pendency of the bill in the legislature several requests were also received from members of that body who desired information as to the progress made in other States on the lines of statutory modification of the common law governing the relations of employer and employe, as a guide to intelligent action on the measure then before them.

A desire to avoid injudicious and disturbing radicalism in dealing with the subject, while at the same time providing for New Jersey wage earners a protective statute equal in scope and efficiency to that which his fellow producers are enjoying elsewhere, appears to have actuated the friends and advocates of the measure, both in and out of the Legislature, hence the general desire on the part of all interested for the fullest possible light on the subject of what had been accomplished on similar lines in the other great industrial States. To meet this demand and at the same time provide a reliable guide for whatever future legislative action may be regarded as expedient, if experience shall demonstrate that the statute of 1909 falls short of answering the purpose of its enactment, is simply to discharge an important public duty which is especially incumbent on this Bureau.

It may be that no law relating to the liability of employer to employe can be expressed or administered in such a way as to be entirely satisfactory to both sides in such litigation as must in the nature of things often arise between them. Improvement, however, is often attainable where perfection is beyond reach, and friends of the principle of employers' liability in this State are quite unlikely to rest satisfied, if, in its administration, our present law is found to fall short of the results anticipated.

In these reasons, supplemented by the further and still more important one that New Jersey is one of the greatest of the industrial States, ranking second among the commonwealths of the Union in the proportion of her population engaged in pursuits most productive of this class of litigation—that is to say, steam and electric railway transportation, manufacturing industry, construction work and the wide variety of hand crafts included collectively under the general designation of building trades, there is, we believe, ample justification for the space given to the subject in the following pages.

For many years past this Bureau, in pursuit of its duties to investigate and report on all matters pertaining to the material and moral well being of labor and industry in New Jersey, has sought to direct public attention to the unjust character of the burdens imposed upon wage earners by the existing law, while at the same time maintaining an unremitting advocacy of their just claims to legislative relief. As a direct result of these efforts a

bill was introduced in the Legislature of 1898 providing for the appointment by the Governor of a commission to consider and report on the advisability of re-stating the just and wisely expressed principles of the common law relating to master and servant in the form of a statute under which the rights of both parties would receive equal protection. The bill failed of passage, but was revived in the same form and passed by the Legislature of 1906; the present honored Governor of the State, at that time a justice of the Supreme Court, was a member of the commission, and its report, which was made two years later, was favorable to the change in the law demanded by the enlightened spirit of the time. The liability act, now on the statute books, was the direct and logical outcome of all this work, and soon, it is hoped, litigation between employer and employe will cease to be such a grievous source of disappointment and irritation as it has been heretofore. The employer should know the extent of his liability to his employe, and the workman in his turn ought to be reasonably certain of compensation in case of injury without, as now, risking the loss of both his case and his situation.

The analysis of the common law which follows is based on an exhaustive study of the subject by Lindley D. Clark, A. M., which was published recently by the Federal Department of Commerce and Labor, and the regulating statutes which include enactments on the subject of employers' liability in all the States, up to and including those of the year 1909, were obtained through the courtesy of the authorities of the several States.

COMMON LAW LIABILITY.

The doctrine of the employers' liability under the common law is presented under the heads of duties and defences of the employer.

THE DUTIES OF THE EMPLOYER.

The two principal factors in the problem are the duty of the employer to protect his employe in the discharge of the duties of his employment, and the assumption by the employe of the risks involved in the undertaking in which he is engaged under his contract of employment. The duty of the employer is first considered, but in order to discuss it intelligently the modifications resulting from the complementary obligations resting on the employe must be constantly borne in mind.

Briefly stated, the rule governing the employer is that he is required to use due care for the safety of his employes while they are engaged in the performance of their work. This is taken to include all reasonable means and precautions, the facts in each particular case being taken into consideration. If such provisions have been made as a reasonably prudent man would supply, if he himself were exposed to the dangers of the servant's position, no negligence would appear. In the case of corporations, the duty is fixed at the use of such caution and foresight as a corporation controlled by careful, prudent officers ought to exercise.

Though the courts of review have refused to sanction instructions tending to charge the employer with a higher degree of care than that which may be defined as ordinary, the measure is not an absolute one, but proportioned to the dangers to which the employe is exposed. The ordinary incidents of railroading, mining and certain classes of manufacturing are in themselves, when compared with general employments, unusually dangerous; for instance, a large railroad yard as compared with a smaller one, an express train as compared with a freight train, or a gaseous mine as compared with one in which no such danger exists. In such cases as these, or when temporarily abnormal conditions prevail, ordinary care is advanced far beyond the requirements of less dangerous conditions. The greater degree of care is required for the protection of youthful employes, and the master is not relieved by the fact that a servant of tender years misrepresented his age in order to secure employment.

PLACE AND INSTRUMENTALITIES.

TOOLS AND APPLIANCES.

The rule as to due care requires the master to supply tools and appliances that are reasonably safe and reasonably well adapted to perform the work in contemplation. These must be provided at the place of use or at a place of such ease of access as to be reasonably procurable.

PLACE AND MATERIALS.

The master must provide a safe place to work and proper material for use; that is to say, not absolute but reasonable or adequate safety. The distinction between place and appliance is not an easy one to draw, though the courts are stricter in their requirements as to the former than to the latter. Thus, if a scaffold furnished by an employer be regarded as a place to work, he is responsible not only for the materials supplied, but also for the construction and maintenance; while if it be viewed only as an appliance, he must make reasonable provision therefor, but its insufficiency, if such there be, may be laid to the fellow workmen of the injured employe, or perhaps to his own negligence in erection.

NEW DEVICES.

What may be required in the way of improvement and alteration or in the adoption of new devices to accomplish the ends of safety is governed largely by the usual and ordinary course of procedure of those in the same business. The employer cannot be made an insurer, nor is he bound to introduce the newest and safest appliances. On the other hand, he is not allowed to disregard all inventions for the safety and comfort of his workmen. But as new devices become more generally used, the standard of the custom of prudent employers becomes correspondingly altered, and the law of general usage may compel the adoption of devices, the non-use of which

had not previously been considered as negligence. This rule applies more effectively in the case of installing new equipments or beginning new undertakings than when the question is one of the modification or continuance of established conditions.

The doctrine that the employer is bound to safeguard his employes from exposure to unreasonable risks is subject to the qualification that one has a right to carry on a business which is dangerous, either in itself or because of the manner in which it is conducted, provided it does not interfere with the rights of others, without incurring liability to a servant who is capable of contracting and who knows the dangers attendant on the employment. While except in a very extraordinary case the employer's right to exercise a reasonable judgment and discretion in the conduct of his affairs will not be interfered with, he is not, however, permitted the use of unreasonably dangerous appliances, nor those which are either so defective, obsolete or inferior that their adoption or retention would of itself indicate negligence. The question is held to be one of not comparative safety, but of reasonable safety. Therefore no fixed rule of liability is possible in this respect, each case being of necessity decided on its own merits.

Where a convenience is of great advantage, its adoption may be regarded as obligatory, at least where the change involves but small cost. It is not clear how far expense may be offered as a defence, there being, as the commentator says, no case at hand in which that alone was held to relieve the employer from the duty of correcting abnormally dangerous conditions.

REPAIR.

The same care is required of the master in maintaining as in furnishing safe and suitable appliances. The continued use of tools that are so worn as to increase the danger of their use will in general entail liability on the employer. If, however, the danger is an obvious one, the employe, having a knowledge of the danger and continuing to work without complaint, will be considered to have assumed the risk, and cannot recover in case of injury; nor will the employer become liable unless he has, or reasonably could have information of the defect requiring repair.

But the rule may be qualified by the usages of the trade, the custom of the shop, or the nature of the instrumentality. Simple repairs may be made by the users of the tools, in which case the employer is without liability. If a machinist is specially employed to make repairs, a man injured while attempting to repair his own machine is without right of action. Perishable appliances, such as rope, belts, etc., which wear out from use, should be renewed at proper intervals if the master is to stand clear of the charge of negligence.

INTENDED USE.

Liability attaches only where the injury is received while the appliance or tool is being used for the work and in the manner for which it was intended and furnished. Thus the workman who rides on an elevator intended

only for freight, does so at his own risk; so also the use of a ladder for splicing to another when it was intended solely for use alone. Continued indulgence in a practice with the master's acquiescence, or the adaptation of an appliance to new uses by the master himself or by his representative, qualifies this rule, so that if such use involves increased danger and a servant is injured thereby, the master cannot defend himself by pointing out the deviation from the original use.

CUSTOMARY METHOD.

An employer is not liable to an employe for an injury incurred by a departure from the customary method of performing work or by leaving the place of his employment to work in some other department unless on instructions from the master or his properly authorized representative. If a more dangerous place or method of work is chosen when one less dangerous was available, the resultant injury, if any, does not charge the master with liability.

INCOMPLETE APPLIANCES.

Where an employe is engaged in repair work, or in bringing an unfinished appliance to completion, or in tearing down a structure, there is a lower standard of employers' liability, the reason being that a greater degree of danger is obviously present under such condition and the employe is correspondingly obliged to be on his guard. But there is no rule totally relieving the employer, and unnecessary and abnormal dangers are not included in the risks assumed by the employe.

INSPECTION.

The duty of making repairs necessary for maintenance involves the duty of inspection to ascertain when such repairs are needed. The inspection required for maintenance differs somewhat from that presumed to have been made at the time a new plant or new tools are first brought into use. An employer that makes or supplies an instrumentality is chargeable with such knowledge of its defects as ordinary care during the course of its manufacture would have disclosed. He is not relieved of this liability by subsequent inspections so long as the defects continue, and notice of such defects is not necessary to fix his responsibility. In case of purchase, the duty of inspection may ordinarily be assumed to have been performed by the manufacturer, but a failure to indicate to the manufacturer the intended use of the machine or appliance so that he might make tests appropriate to such use, has been held to imply negligence. If the machine or appliance is of an approved pattern and the dealer from whom it is purchased a reputable one, the presumption is in favor of the employer's non-liability. In some jurisdictions, however, it has been held to be the duty of the employer to cause a thorough inspection of newly purchased articles before putting them in use. This view accords with the doctrine of non-delegable duties discussed below, and also affords protection to the employe where there

has been actual negligence on the part of the manufacturer with whom he has no contractual relations.

The necessary for inspection of instrumentalities in use varies with the nature of the appliance and the circumstances of employment. Small and simple tools may be used without inspection, as the employer is entitled to assume that the workmen are suitable judges of the fitness of such tools for use. Complex or dangerous machinery or instrumentalities liable to rapid wear or deterioration must, on the other hand, be subjected to inspections of a nature and frequency adapted to the conditions indicated. Inspection, however, being only a means to an end, the fact that due provision has been made therefor will not absolve an employer from liability where he has actual knowledge of defective conditions obtained through some other means than by inspection. If the employer has in fact made proper provision for inspection, he will not be charged with liability if the appliance should afterwards prove defective.

Duty requires only a reasonably careful inspection, though no defects will be considered latent which may be discovered by the exercise of due care. External appearances, however, may be such as to demand a more thorough inspection; so also of appliances showing defects in operation, or those to which some accident has occurred of a nature likely to cause obscure injuries. The frequency of inspection must depend on the nature of the appliance and its liability to change under the conditions of use. Appliances much worn and not maintained at a good standard of condition according to common usage require more frequent inspections than do newer and more efficient appliances.

OWNERSHIP OF APPLIANCES.

The duty of inspection above considered assumes the ownership of appliances and premises to be in the employer. Where ownership is divided various distinctions exist, based on the relations of the employer and the owner of the instrumentality or premises; if the employer has not full control over the instrumentalities he is usually held to be exempt from liability. In the handling by railroad companies of cars belonging to other roads, the conditions are different; such cars, although received only temporarily and for the purpose of transportation, are as completely identified with the owners' plant as if the transfer had been made by purchase. In actions for injury, therefore, in which such cars are factors, the employer cannot avoid liability by pleading non-ownership or lack of control of the same. A railroad company is not obliged to receive and turn over to its employees a defective or dangerous car, and every company is under a legal obligation not to expose its employees to dangers arising from such defects of foreign cars as may be discovered by reasonable inspection such as the company's own cars receive while in use, before such cars are received into its trains.

Where dangers from the use of foreign cars arise, not from defective equipments, but from differences of construction, it has been generally held that the employee assumes the obvious risks thus arising, but if shown to be ignorant of the risk, his right of action would follow. The statutory

requirements of automatic couplers, however, is not met unless the various kinds brought together will actually couple by impact; the mere fact that they will so couple when used with others of the same make is not a sufficient compliance with the Federal statute.

HIRING CO-SERVANTS.

Besides the duty to use care in regard to inanimate or irresponsible instrumentalities, the employer must also be reasonably careful to see that each employe hired by him is properly qualified to perform his duties without greater risk to himself and his co-employes than the nature of the business necessarily involves. The same principles apply here as in connection with the duty as to appliances. Where the danger to be guarded against is greater or the skill needed for safety is of a higher order, the degree of care demanded in the selection of employes is correspondingly increased. Obviously the question of experience or ability would be of little importance in mere manual labor, unrelated or not immediately related to other stages of work, while for certain other classes of manual labor involving the possibility of injury through ignorance or incapacity on the part of the laborer, definite inquiries as to qualifications are necessary to relieve the employer of the charge of negligence.

The disqualifications of persons of suitable age may be mental, moral or physical, the most common being those that arise from the intemperate use of intoxicants, though habitual carelessness or recklessness on the part of an employe, such as may reasonably come to the knowledge of the employer, will also charge him with liability. The element of knowledge, either actual or constructive, is an essential one. A plaintiff grounding his claim on the negligence of the employer in hiring an incompetent servant must prove, not only the incompetence, but also that the employer failed of proper care and diligence in the original hiring or in subsequent inquiry as to the incompetency of which notice was given during the term of services. It must further appear that the injuries complained of were caused by the incompetence charged.

Although the employer's duty in regard to care is a continuous one, the presumption of good character and suitable qualifications can be relied on by an employer who has used due care in the original hiring until notice of a change. A single act of negligence or display of incompetence is not enough to fix the employer's liability for continuing to employ the servant guilty of the same, but notice thereof may be presumed to put him on his guard. It has been held in some cases, however, that the quality of a single act notoriously objectionable indicated a degree of incompetence sufficient to charge the master with liability for the employment of the person committing it. Evidence of the commission of several acts of negligence is, in most jurisdictions, held to be competent proof of the unfitness of a servant.

Corollary to the obligation to employ competent co-servants is the requirement that a sufficient number shall be provided for the reasonably safe performance of the employer's work. He is required also to see that the employes engaged are properly distributed to the various parts of the

establishment and that physical fitness for work may be assured by allowing opportunity for rest and time for meals.

RULES.

Another branch of the employer's duty is that of providing appropriate rules and establishing a suitable system for the conduct of his work. This applies only to business sufficiently complex to make such arrangements reasonable; it is not assumed, however, that rules can be so framed as to guard against every contingency. The duty is held to extend to the enforcement of reasonable and practical rules, ordinary care being used to anticipate and guard against such accidents as can be reasonably foreseen. Inadequate rules or enforcement of the same that is palpably ineffective will not satisfy the law, the presumption is in favor of sufficiency of those provided, and it has been held that only manifestly unreasonable or clearly insufficient rules would leave the employer open to the charge of negligence. But in this, as in other cases, common usage is in general regarded as conclusive. The absence of rules may be condoned if it appears that the custom of carrying on work without them is actually sanctioned by the employer and understood and approved by the employes as being binding upon them. A mere custom of employes, however, apart from the employers' approval or enforcement will not suffice.

Such rules and practices as are prescribed must be brought to the knowledge of the employe before he is considered to be bound by them, but it may be inferred from circumstances that this has been done. Express contracts with reference to the conditions of employment as affected by specified rules, are conclusive as against an employe pleading ignorance of such rules. Continuance in service for a considerable length of time or the fact that printed copies of rules are furnished or posted about the works with directions that they be read are circumstances that will be construed against the employe in case of claims based on alleged ignorance of rules.

Enforcement of rules is no less a duty than their promulgation in so far as a reasonably careful supervision will accomplish it. In the absence of steps to enforce rules that are repeatedly violated, it has been held that the master has sanctioned their abrogation and that they are no longer binding. Their violation would not then be regarded as negligence, nor could the employer offer such rule as a defence.

INSTRUCTIONS AND WARNINGS.

Besides the general rules by which the conduct of business is governed, instructions are necessary either in case of specially dangerous conditions, or the employment of inexperienced persons. The principle underlying this duty is the same as in the case of providing appliances, viz.: liability on the part of the employe does not attach on account of the dangers of the situation, but of placing the employe in a position of the hazards of which he is excusably ignorant. There is no legal necessity for giving instructions or

warnings where the employe's knowledge as to conditions and means of safety is equal to that of the employer, nor where, all the circumstances considered, adequate knowledge can be fairly attributed to him. Men employed on repair work, or those whose duty is to make dangerous places safe, are not entitled to instructions so far as the dangers involved relate only to the places or appliances that engage their attention. It has been held, however, that it is not a mere knowledge of conditions, but a comprehension of the dangers attendant thereon that must be shown in order to absolve the employer from responsibility. Misrepresentations on the part of the employe as to age and experience have been held by some courts to relieve the master of the duty to instruct, while others deny such effect. Regarding the duty as one of "proper care," it would seem that the employer cannot be absolved from the duty of disclosing dangers which are not obvious, by any statement whatever of those whom he may employ, though the circumstance of the employe's representation may be considered.

As persons of tender years are particularly unlikely to understand the risks attendant upon the use of dangerous machinery, the duty of instruction will be held to apply most rigidly in cases of their employment. Where a person is too young to realize the dangers or to profit by the instructions given, the employer is not freed from liability even by giving such instructions as under ordinary conditions would be sufficient.

Not every contingency is to be anticipated in the giving of instructions, but only such as are probable in the conduct of the business while the employe keeps within the scope of his employment. Increased hazards, of which the employer has or should have knowledge, should be brought to the attention of even experienced workmen who are not in a situation to acquire timely knowledge for themselves. The instructions must be sufficiently definite and explicit to call attention to the specific dangers and must be timely and adequately imparted to the person for whose benefit they are intended. What amounts to a sufficiency of instruction cannot be determined by any set rule, but will vary with conditions. It has been held that a mere notice to be on one's guard is not sufficient, but that the particular danger and a probably safe way of avoiding it should be pointed out. Conditions, however, may make the enforcement of this rule unnecessary or even impracticable, for the danger may be discoverable or avoidable by proper circumspection, or it may be of such a nature that only the person actually present can determine at the time how it may be best avoided.

A railroad employe rightfully on the track may expect warning of the approach of a train; also the crew of a freight train is entitled to receive warning if likely to meet unusual obstructions in a yard at night. Under the doctrine of the "last clear chance" this duty to warn is held to be such that, notwithstanding the previous negligence of the injured person, if, at the time the injury, it might have been avoided by the exercise of reasonable care on the part of the defendant, he may be liable for failure to exercise such care. In a recent case in Missouri it was held that under the theory of the "humanitarian doctrine" of the employer's liability, an employe, even if negligent, can recover where it was practicable for persons in charge of

a train to avoid inflicting the injury on account of which the action was brought.

RESTRICTIONS OF EMPLOYEE'S RIGHT TO RECOVER.

The courts will in general discountenance efforts on the part of the employer to make his workmen insurers of their own safety by the adoption of rules, or by the requirements of contracts releasing him from liability. Thus it has been held that a rule requiring an employe not to attempt to use appliances unless he knew that they were in proper condition imposed upon the servant one of the duties of the master, that is, of seeing that the implements furnished are in a reasonably safe state of repair, and such a rule was declared void. A stipulation exempting a railroad company from liability for injuries to employes by its negligence is void as against public policy. A contract to the same end but executed after the employe had entered on service, was held void for want of consideration, and even though based on sufficient consideration, a contract relieving the employer of liability has been declared void as against public policy.

It has been held that an employer cannot relieve himself by contract of liability imposed by statute, although the statute itself made no reference to such contracts. Continuance in service with knowledge that the provisions of a statute requiring the guarding of machinery were not being complied with has been held not to be a waiver of rights on the parts of the employe, nor a valid defence in an action for injuries resulting from the employer's failure to comply with the law. There is, however, a strong list of cases on the other side. In some jurisdictions express contracts limiting or denying the employe's right of action have been upheld. But statutes exist in a number of States declaring such contracts void so far as they affect any liability fixed by law. Where relief benefit funds are maintained jointly by employers and employes, the rulings are quite uniform in favor of the contract, the terms of which are in general that acceptance of benefits by the injured employe shall operate as a waiver of his right of action at law against the employer, and that if such action is brought and carried to a finality by either compromise or judgment, no claim shall lie against the fund. In effect such contracts merely require the employe to choose whether to apply to the relief benefit fund or to sue. If, however, there is a lack of mutuality, or the defendant company fails to show that it pays a fair proportion of the benefits, even the acceptance of such benefits will not bar a suit for damages, nor will a partial payment of the agreed benefits avail as a bar to the action, though a full compliance with the terms of the contract would have that effect.

The agreement that claims on the benefit fund are forfeited by suit carried to judgment or compromise was held valid in an Iowa case, but in New Jersey the Supreme Court ruled that "the judgment intended is one by which the claimant recovers some compensation for the loss alleged" and granted a new trial in a suit for the benefit damages at law that had not been secured.

A further variation in conditions is found in the case of persons not employes of the company charged with causing the injury by its negligence or that of its employes, but who are being carried as part of the contract of their employment. Such cases arise in the employment of express messengers, who, while not employes of the railroad company, are also not in the status of passengers. A contract between the express company and the railroad company over whose lines the former wishes to do business may contain a clause by which the express company agrees to hold the railroad company harmless from all liability for injuries to its employes while being transported, whether such injuries were caused by the negligence of the employes of the railroad company or not. Then by contract with its employes, the express company may procure an agreement as a condition of employment, that the applicant will assume all risks, and make no claims for injuries however occasioned. The United States Supreme Court held in a case before it, that such a contract was a valid release of the employer and the railroad company from liability for injuries, provided the messenger is aware of the contract between the companies; if otherwise he is not bound by its terms.

DUTIES NON-DELEGABLE.

Considering the employer's duties to his employes as a matter of personal obligation, it would follow that the employment of a person to perform these functions in his stead will not relieve him of responsibility if there be a defective discharge of the duties which he was engaged to perform, and such is the view generally held by the courts. In determining the question of the employer's liability, the relations of fellow servants are involved, and the decisions will be found to turn largely on the point of whether the negligent employe was, with reference to the act occasioning the injury, a co-employe or whether he was the representative of the employer in that particular act. The courts have in general held to the view of the non-delegable quality of the duties devolving upon the employer, the ruling being that he can relieve himself from liability by a reasonable performance of the same. In some jurisdictions, however, it has been held that the appointment of an employe to perform the duty was a sufficient discharge of the obligation; but in a number of cases the rule seemed to be that the employer is liable only in case of failure to supervise such servants as he had appointed to discharge what are in other jurisdictions classed as non-delegable duties. In other cases it was held that if reasonable diligence would have disclosed the defective manner in which work was being done, the employer must answer for the incapacity or negligence of his agent. It is not sufficient that a competent representative be appointed and give the proper orders. Reasonable care must be taken to follow up the orders and see that they are obeyed.

SUPPLIES.

In a Federal circuit court of appeals, and in the courts of appeals of several States, the employer's liability has been maintained in cases of injury

arising from the neglect of independent contractors in the furnishing of appliances or the maintenance of a safe place to work. In a number of other States, including New Jersey, the opposite view has been taken, the employer being held blameless for injuries resulting from conditions or appliances immediately under control of the contractor.

INSPECTION AND MAINTENANCE.

The duty of maintaining appliances in safe condition devolves upon the employer; an exception, as already noted, being made in the case of small tools and appliances, the condition of which is at all times perfectly apparent to the user. In general, this duty of inspection and maintenance is held to be non-delegable, but in some States, among them New Jersey, the contrary view is held.

A distinction that is sometimes made charges the employer with liability if the repair work is done by a person specially delegated therefor and not engaged in using the apparatus or appliance, although there are some decisions which make repair hands fellow servants with the users of the instrumentalities, and generally this view is taken if the repair work is of a temporary character. As to duties prescribed by statute, it appears to be the rule that in the absence of express legislative declaration they will be held as delegable or non-delegable according to the common law classification of such duties.

ASSUMPTION OF RISKS.

When a contract of employment is entered upon the law imports into the agreement an assumption by the employe of the ordinary risks incident to the employment, and of such other risks as may be known to and appreciated by him. One seeking employment impliedly represents that he is capable therefor and that he comprehends the ordinary risks. Employers are not insurers, and are liable for the consequences, not of dangers, but of their own negligence in guarding against them to the extent required by the common law, except where some duties are by statute made obligatory upon the employer so far as to fix his liability in case of injuries entailed by their omission.

A workman of mature years and ordinary intelligence offering himself for employment is presumed to know and appreciate the conditions and to assume the risks incident to the service and to be aware of all risks which, to one of his experience and capacity, are, or ought to be, open and obvious. He does not assume risks arising from conditions of which he was actually and excusably ignorant, nor is he required to use more than ordinary care to discover existing conditions. A class of cases, however, in which the question of knowledge of risks is not raised is where the conditions complained of are the results of the employe's own choice or selection of a course of action. In such cases the risk is assumed irrespective of anything

in his contract of service, the employe being held to be responsible for the proximate results of his own conduct.

ORDINARY RISKS.

To know just what are ordinary risks becomes important in view of the fact that with regard to them employes are relieved of all responsibility, even if the employe did use ordinary care, unless by reason of inexperience or being a minor he was not chargeable with having assumed such risks.

Ordinary risks, as defined by the courts, are those that pertain to the employment after the employer has discharged fully his duties as to safe place, appliances, etc., and which ordinary care on his part cannot guard against.

These risks are such as arise from the negligence of fellow servants, unless the employer was negligent in employing incompetent workmen; or from the nature of the instrumentalities used; or from the conditions, either permanent or temporary, of the nature and conduct of the business. The master cannot undertake, for instance, to make railroad labor or the manufacture of explosives as safe as many other much less hazardous employments, and the risks of such work are held to be assumed according to the standard for the industries themselves. In construction and repair work, as already pointed out, the master's liability is very considerably modified, and the risk which the employe is held to assume correspondingly increased. This rule applies only to employes actually engaged upon the work, and the risks assumed by them are only those that arise from the work in hand and not from defects in portions of the work already completed. There are, however, some decisions which class repair hands as fellow servants of the users of the instrumentalities.

EXTRAORDINARY RISKS.

Risks which may be avoided by the exercise of reasonable care on the part of the employer are classed as extraordinary, and these the employe is held not to have assumed without a knowledge and comprehension of the dangers arising from the employer's negligence. If the dangers are visible or are brought to the knowledge of an employe, his entering upon or remaining in the service is presumed to be a waiver of his claim against the employer for injuries that may result therefrom.

In the first case he will be held to have made his contract of employment in the light of existing conditions, and as to the risks arising during employment it is a rule that a servant continuing to use an appliance which he knows to be dangerous does so at his own risk and not that of his employer. It must appear, however, that the risk was actually understood. While a failure to notify the employer of known or discovered risks is construed as an indication of his willingness to continue at work while they exist, the risk is not thrown upon the employer by a mere notification not followed by his promise to repair. If the alternative of continuing to work with the defective appliance or of leaving the employment is offered, and the

employe continues at work he will be held to have assumed the risk. A promise to repair can be relied upon only for a reasonable time, after which the risk will be upon the employe.

In case of temporary forgetfulness of dangerous conditions the prevalent rule seems to be that the employe is not allowed to deny his having assumed the risk because of the rapidity of thought and action necessary to meet the exigencies of any occasion if it is established that he had before the accident a full comprehension of existing risks.

CONTRIBUTORY NEGLIGENCE.

When a risk involves such a degree of danger that a prudent man would not assume it, the defence to an action by an injured employe is not that the plaintiff, by his contract, assumed the risk, but that he was by his conduct guilty of contributory negligence. The line is not clearly drawn between the two defences, nor is it always easy to do so, as the facts in a case may support either defence. The principles are, however, distinct, as assumption of risks is an implied or actual agreement entered into before the happening of the accident, to hold the employer blameless for injuries resulting therefrom, or it is incident of the contract read into it by the fixed rules of law. If, however, there has been contributory negligence, there is no reference to contract, express or implied, but only to the employe's own conduct. If, under all the attendant circumstances, he fell short of reasonable and ordinary care, the defence of contributory negligence will lie against him.

The rule is announced by Cooley as follows: "If the injured party, by the exercise of ordinary care under the circumstances, might have avoided the consequences of the defendant's negligence, but did not, the case is one of mutual fault, and the law will neither cast all the consequences on the defendant nor will it attempt any apportionment thereof." The contributory negligence, to be a sufficient defence for the master, must be strictly that of the party injured; that of a fellow servant co-operating with the negligence of a master is no defence for injuries resulting from their combined negligence.

CAUSE OF INJURY.

To bar his action the negligence of an employe must be the actual and proximate cause of his injury. Conduct merely bringing about the occasion of the injury or the condition which brought it about does not amount to negligence. Even if the employe was guilty of negligence which may have contributed to the accident, such negligence will not destroy his right of action if the employer, by the exercise of ordinary care, could have avoided its occurrence. Where injuries result in death the right of the personal representative to sue, which does not exist under the common law, but is now given by statute in New Jersey and some other States, is subject to the same limitations as would have been the right of the injured person if he had survived.

NEGLIGENCE THAT BARS RECOVERY.

The test of what does and what does not constitute such negligence as to bar an employe's claim for damages varies according to circumstances, the rule being that the servant must conduct himself as a prudent person would in a like position. A servant engaging in work for which he is not qualified by previous experience, and incurring injury, is held to have been negligent. In some jurisdictions the master is not held responsible even though he knew when he hired the employe that his experience made the labor abnormally hazardous, but such views are not generally accepted. If the precautions appropriate to dangerous situations are omitted, or if, having the power of choice, an unnecessarily dangerous method of doing work is chosen, or if he goes into or remains in a place of unnecessary danger, he will be held to be guilty of contributing to his own injury. Inattention to surroundings and going in the line of duty into a place of unusual danger without notifying those from whose reasonably anticipated acts harm might befall him have the same effect. The fact that an employe's presence where he was injured was not required in the performance of duty will bar recovery. Using an appliance for a purpose other than that for which it was intended, if the same be suggestive of danger to a person of reasonable intelligence, will usually be a bar to successful action, and departure from the customary method of doing work has been held to indicate negligence, though not conclusively.

The use of defective or otherwise unsuitable instrumentalities may be held as negligent, as is also the violation of orders or of specific rules of which the employe has notice. Violation of municipal or statutory regulations, though it be sanctioned by the employer or even if done by his direction, will disqualify the employe for maintaining an action unless the order was not known by the employe to contravene such regulations.

PLACE OF DANGER.

The general rule is that an employe loses his right to a recovery by remaining at work after the discovery of unsafe conditions; it is his duty to leave the service in time to escape the threatened danger. How long he may delay and still have recourse to his employer for compensation for injuries cannot be determined in any general sense, but in most jurisdictions it is allowable for the employe to remain a reasonable length of time, and especially if his immediate departure would jeopardize the safety of others, as in train service on railroads.

It is not a justification for the employe that he is restrained by fear of losing his employment, although some courts are not inclined to a strict enforcement of the doctrine of negligence where service is continued under dangerous conditions, if the fear of discharge is well grounded, provided the employe's conduct falls short of recklessness.

KNOWLEDGE OF DANGER.

It is not negligent for an employe to expose himself to danger of which he is excusably ignorant, and even if defects are known to exist the employe may still recover if it appears that the dangers involved were not appreciated. They must be so obvious that a reasonably prudent man would recognize and avoid them. A knowledge of the defects, however, may be of such long duration that an appreciation of the dangers will be presumed. If abnormally dangerous conditions were so suddenly and unexpectedly developed as to make it unreasonable to hold the employe to an anticipation of them his failure to avoid their results will not be considered negligence as a matter of law. If, however, the dangerous conditions are produced by his own prior negligence the employe cannot recover.

The doctrine that knowledge furnishes a basis for imputing negligence is modified by the employer's promise to guard against dangers; by his assurance of a safe place to work; and by proof that the injury was incurred while the employe was obeying direct orders from his employer or his representative.

WHEN NEGLIGENCE IS NOT IMPUTABLE.

Some of the chief defences of the employe against the charge of contributory negligence are: Danger incurred in the attempt to save life, unless so hopeless that the act would amount to rashness, is not negligence as a matter of law. The general rule seems to be that the courts will not examine too critically the grounds of the plaintiff's reason for expecting success, nor will he be charged with fault if the actual danger was greater than he anticipated. The same principle controls, but in a lesser degree, in cases where the peril is encountered in an effort to save the employer's property.

In general an emergency will be held to have a qualifying effect, both because of the unusual promptitude of action required, and because the mind is likely to become more or less confused under such circumstances. If a workman is so absorbed in the performance of duty that existing dangers are momentarily forgotten, the necessity for the attention to duty may relieve the employe of the charge of contributory negligence. If an act that under other circumstances would preclude recovery is performed under the influence of bodily pain, it will not, as a matter of law, be regarded as negligence.

NEGLECT.

Apparent necessity may justify an otherwise negligent action, unless the same be obviously rash. Where the master's rules or customary practice prescribes a certain method of performing work, an employe who is injured while conforming thereto is not guilty of contributory negligence. An employe injured on account of conditions leading thereto which were outside his power to control is not guilty of contributory negligence; neither

is he if his injuries are received through reliance on the presumption that tools and appliances are in good condition, and that the work in other departments will be properly done. Minority is frequently a defence to the charge of negligence, either absolute or partial, varying with the age and the mental and physical capacity of the individual. But these mitigating elements are of no avail as a defence if the emergency or other dangerous condition is brought about by the prior negligence of the injured employe.

THE FELLOW SERVANT RULE.

The remaining defence to an employe's action for damages is what is known as the "fellow-servant" rule, or the doctrine of common employment. According to this the employer who has discharged his duties as to a safe place to work, suitable appliances, competent fellow servants, etc., is not liable to an employe for the acts or negligence of any fellow-servant or co-employe, provided such co-employe does not represent the employer. Or it has been otherwise stated, "A master is not bound to indemnify one servant in the same common employment as himself, unless the negligent servant was the master's representative." If, however, the negligence of a co-servant is concurrent with the negligence of an employer in causing the injury, the injured employe not contributing thereto, the employer will be held in damages.

The contradictory rulings of the courts as to the application of this rule arises from the lack of precise and generally accepted definitions of what is meant by common employment and by representation of the master. The relations of this doctrine to the other elements which determine employer's liability are such that practically all that has been said with reference to the duties of the employer and the assumption of risk by the employe must be read in the light of the rulings of the courts on the subject. In an opinion on a fellow-servant case which was before the United States Supreme Court a few years ago, it was said that "there is perhaps no one matter upon which there are more conflicting and irreconcilable decisions in the various courts of the land than the one as to what is the test of common service, such as to relieve the master from liability for the injury of one servant through the negligence of another." Not only do the courts of the various States differ, but from time to time fluctuations of opinion are found in the individual States, so that it is important to know the date of an adjudication in order to determine the latest construction in the State.

In a number of States the attempt has been made to fix the status of the relation of employes to one another, and to determine the liability of the employer for their acts or negligence; and this appears to be the only practical method of solving the problem as it exists to-day. It is apparent, however, that even where statutes of different States are closely similar and even identical in phraseology, the effect of local interpretations is discernable in the varying constructions placed upon them.

The reasons offered by the courts for the "fellow servant" rule are various, one being found in the view that the master's responsibility is at

an end when he has used ordinary care to employ competent servants. It is held that the employe assumes the risk of the possible negligence of a co-employe as an incident of the employment. Another opinion states that "the obvious reason for exempting the employer from liability is that the employe has, or is supposed to have such risk in contemplation when he engages in the service, and his compensation is arranged accordingly, so that he cannot in reason complain if he suffers from a risk which he has voluntarily assumed and for the assumption, of which he is paid." Public policy is advanced as another reason, the rule tending, it has been claimed, to "make employes more watchful over their own conduct and that of their fellow workmen, thus benefitting employers, employes, and the public alike by the greater care with which they perform their duties." The idea is also advanced in justification of the rule that any marked enlargement of liability to employers would lead to the withdrawal of capital from industrial enterprises, thus reducing the opportunities of employment and inflicting damage upon the whole community.

Each of these reasons has been adversely criticised and no one of them seems to give a satisfactory ground for compelling the employe to bear the burden of pure accidents which occur in the prosecution of undertakings, the advantages of which are to be enjoyed by the employer. The last two reasons are most frequently cited in support of the fellow servant rule, but no results of the kind therein indicated have followed where statutes have been adopted greatly enlarging the rights of employes to recover for injuries resulting from industrial accidents.

In any action involving these principles the chief points requiring determination are those of common employment and of representative capacity. If it appears that the injuries complained of are the result of the negligence of a co-employe, the plaintiff can recover only by showing that the negligent person was a vice-principal, representing the master at the time the act or omission occurred.

COMMON EMPLOYMENT.

In view of the above the question then to consider is what constitutes common employment. It was said in a leading case that "all who enter into the employment of a single master are engaged in common service, and are fellow servants," but this statement is too broad to answer as a conclusive test. Employment by a common master and also engagement in the performance of duties that may reasonably be said to tend to the accomplishment of the same end, is necessary to meet general acceptance by the courts. The expressions used by the judges in passing on the question of common employments help but little toward arriving at an acceptable definition of the term. "Engaged in the same general business," "the same general undertaking," or "in promoting one common object," are frequent forms of expression, though in some cases the more definite phrases, "services having an immediate common object," or "working in the same place to subserve the same interests," are used. The question of common employment involves

both law and facts, but where the latter are undisputed, the trial jury will not pass upon it.

A theory that has been adopted in many cases is that the service is common if the negligence of the delinquent servant was, in a fair and reasonable sense, one of the risks contemplated by the injured employe in undertaking or continuing in the employment. By this theory the relation of the duties of the injured and the negligent employes becomes the criterion, together with the question of the negligence of one affecting the safety of the other. In the application of the departmental doctrine, recognized in some jurisdictions, the classification turns on the relation of employes in different departments of the employer's business, more or less set apart from each other. In the courts in which this theory is adopted, the general test of common employment is one of the identity or diversity of the departments in which the plaintiff and the injured employe were at work. Since, however, the term "department" is still without a satisfactory legal definition, the test has become one of interrelated duties, that is to say, such a relation of duties of the injured and the delinquent employe, as that the former had or had not a reasonable opportunity for protecting himself from injury by his own efforts. The jurisdictions in which interrelation of duties has been more or less uniformly made the test of co-service are Georgia, Illinois, Kentucky, Louisiana, Missouri, Nebraska, Utah, Virginia, Washington, West Virginia, and such Federal Courts as have adopted the rule to conform to local practice. The rule is also followed in Tennessee, but in railroad cases only.

As a result of an analysis of a large number of cases in which the departmental doctrine controls, the following elements are presented by a leading text writer as determinative of the rights of the injured employe:

(a) Whether or not he had an opportunity of observing the extent to which the negligent servant was competent for the performance of his duties and the manner in which he habitually conducted himself.

(b) Whether or not he was able to take appropriate measures to ward off a danger occasioned by an act committed or about to be committed while the work was actually in progress.

(c) Whether or not he could lessen the risk of injury by exerting on the negligent servant an influence calculated to promote caution and diligence on the part of the latter.

(d) Whether or not he was able to protect himself by reporting delinquencies, thus securing more careful supervision, or if necessary the discharge of negligent employes.

REPRESENTATION OF THE EMPLOYER.

The representative of the employer is most frequently termed by the courts a vice-principal, although the character of his employment and not the designation by which he is known while at work will be determinative in any case. This rule has been made to extend so far as to relieve the employer even when the injured employe in good faith regarded the negligent employe as his superior, not knowing of the latter's discharge from that position. On the other hand, a co-servant entrusted temporarily with

the duties of a vice-principal must be answered for by the employer no less than if he were permanently holding the position. Representation, however, must be actual. In a majority of the State jurisdictions the mere fact of superiority of rank is not sufficient to charge the employer with liability for the negligence of the superior servant, though the negligence complained of may have been connected with the giving of orders. Nor do these courts consider that the power to hire and discharge is sufficient to transform a foreman of subordinate grade to the rank of vice-principal, as the mere fear of discharge will not justify the assumption of undue risks. It was said in a recent case that "a servant who sustains an injury from the negligence of a superior agent engaged in the same general business cannot maintain an action against their common employer, although he was subject to the control of such superior agent and could not guard himself against his negligence or its consequences." This rule is based on the theory that the contracting employe assumes the risk of his superior's negligence as one of the ordinary risks of his employment. This does not cover cases where the order directs departure from the original scope of the servant's employment, such orders being attributed to the master himself, so that he is held liable for any negligence connected therewith. The rule is also subject to restrictions from the application of the doctrine of undelegable duties, the duty of giving directions as to the details of the conduct of work not being one for which the employer is regarded as personally responsible. This principle does not, except in a few States, extend to actual superintendents or managers of an employer's business; nor is it vital that such representative shall not be employed in part at actual labor, or that he receive a higher salary than his subordinates. There appears to be no fixed rule, but to render the master liable the employe "must be more than a mere foreman to oversee a batch of hands and direct their work under the supervision of the master." Or, as stated in another case, "he must have general power and control over the business and not authority merely over a certain class of work or a certain gang of men."

While such is the rule in the greater number of American jurisdictions, what is known as the "superior servant" doctrine has been adopted in several States. The form of this rule varies in different States, and even in the same State there is inconsistency in its application to different cases, resulting from indefiniteness as to the point where it should cease to control. The theory of the rule is that the duties of supervision and control which devolve upon the master are non-delegable, and its scope is set forth in the following language used in a case before the Supreme Court of Missouri: "Where the master appoints an agent with a superintending control over the work, and with power to employ and discharge hands and direct and control their movements in and about the work, the agent stands in the place of the master."

In by far the greater number of States there is a recognition of an actual general manager or superintendent as the master's representative or vice-principal, for whose acts the master is responsible. While the cases involving the question of vice-principalship in this form naturally disclose for the most part conditions of what may be considered permanent relation-

ship, the same rule has been held to apply to persons occupying the position only temporarily, as for instance in the performance of some specific undertakings after the completion of which the representative would again assume his customary rank as co-employee with his temporary subordinates.

The States in which a superintendent or manager seems to have been, until a comparatively recent date, regarded as a co-servant with other employes, are Alabama, Massachusetts, Mississippi and New Jersey. In Alabama, Massachusetts and Mississippi the common-law rule was modified by legislative enactment in 1897, 1902 and 1906 respectively. The modification of this ruling placing New Jersey abreast of the other States in this respect dates from the act of 1909, which went into effect on September 30th of that year.

In concluding this brief review of the principal common-law phases of employers' liability it is hardly necessary to point out the importance of definite, unifying legislation on the subject as the only means of bringing order out of the contradictory interpretations originating in ill-defined doctrines and rules, as these are promulgated not only by the courts of the several States, but also at different times by courts of the same jurisdiction. In the statutes already enacted an important harmonizing influence is found in the fact that a Legislature enacting a statute copied from another State may be assumed to take over also the construction and interpretation placed upon the law by the courts of the earlier enacting State prior to its adoption by the later one.

It seems reasonable to believe that a long step toward harmonizing the law relating to the liability of common carriers for injuries to their employes was taken in 1908 by the enactment of the Federal statute, entitled "An act relating to the liability of common carriers by railroads to their employes in certain cases." This act will supersede all local statutes and rulings where it applies, and its construction by the Supreme Court of the United States in any case that comes before it will become the authoritative ruling in every jurisdiction on the points involved. Some provisions of this act might be advantageously incorporated into all State statutes on the subject of employers' liability; as, for instance, "That no such employe who shall be injured or killed shall be held to be guilty of contributory negligence in any case where the violation by such common carrier of any statute enacted for the safety of employes contributed to the injury or death of such employe," and further, "That in any action brought against a common carrier under and by virtue of any of the provisions of this act to recover damages for injuries to, or the death of, any of its employes, such employe shall not be held to have assumed the risks of his employment in any case where the violation by such common carrier of any statute enacted for the safety of employes contributed to the injury or death of such employe."

The incorporation of these provisions of the Federal statute into the liability laws of this and other States, and making them applicable to all forms of employment, would go far toward reducing the number of what may be called preventable accidents resulting in injury or death, which, notwithstanding the many statutes intended for the protection of workmen, still constitute a very considerable proportion of the total of such occurrences.

LIABILITY UNDER STATUTE LAWS.

The laws enacted in the different States for the purpose of determining the liability of the employer for injuries to his employes are of two classes; one relating in a general and inclusive way to the subject of general employment, and the other confined to specified forms or groups of employment of which the principal division is railroad transportation.

Following is a compilation of the statutes of the various States regulating the liability of employers for injuries to employes, arranged alphabetically according to States, that of New Jersey appearing in its regular order:

ALABAMA.

CODE OF 1897.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1749. When a personal injury is received by a servant or employe in the service or business of the master or employer, the master or employer is liable to answer in damages to such servant or employe, as if he were a stranger, and not engaged in such service or employment, in the cases following:

1. When the injury is caused by reason of any defect in the condition of the ways, works, machinery, or plant connected with, or used in the business of the master or employer.

2. When the injury is caused by reason of the negligence of any person in the service or employment of the master or employer, who has any superintendence intrusted to him, whilst in the exercise of such superintendence.

3. When such injury is caused by reason of the negligence of any person in the service or employment of the master or employer, to whose orders or directions the servant or employe, at the time of the injury, was bound to conform, and did conform, if such injuries resulted from his having so conformed.

4. When such injury is caused by reason of the act or omission of any person in the service or employment of the master or employer, done or made in obedience to the rules and regulations or by-laws of the master or employer, or in obedience to particular instructions given by any person delegated with the authority of the master or employer in that behalf.

5. When such injury is caused by reason of the negligence of any person in the service or employment of the master or employer, who has charge or control of any signal, points, locomotive, engine, switch, car, or train upon a railway, or of any part of the track of a railway.

But the master or employer is not liable under this section, if the servant or employe knew of the defect or negligence causing the injury, and failed in a reasonable time to give information thereof to the master or employer, or to some person superior to himself engaged in the service or employment of the master or employer, unless he was aware that the master or employer,

or such superior already knew of such defect or negligence; nor is the master or employer liable under subdivision 1, unless the defect therein mentioned arose from, or had not been discovered or remedied owing the negligence of the master or employer, or of some person in the service of the master or employer, and intrusted by him with the duty of seeing that the ways, works, machinery, or plant, were in proper condition.

Sec. 1750. Damages recovered by the servant or employe, of and from the master or employer, are not subject to the payment of debts, or any legal liabilities incurred by him.

Sec. 1751. If such injury results in the death of the servant or employe, his personal representative is entitled to maintain an action therefor, and the damages recovered are not subject to the payment of debts or liabilities, but shall be distributed according to the statute of distributions.

ARIZONA.

REVISED STATUTES OF 1901.

CIVIL CODE.

ACTS OF FELLOW SERVANTS.

Section 2767. Every corporation doing business in the territory of Arizona shall be liable for all damages done to any employe in consequence of any negligence of its agents or employes to any person sustaining such damage; provided, such corporation has had previous notice of the incompetency, carelessness or negligence of such agent or employe.

ARKANSAS.

DIGEST OF STATUTES—1904.

FELLOW SERVANT—RAILROAD COMPANIES.

Section 6658. All persons engaged in the service of any railway corporations, foreign or domestic, doing business in this State, who are intrusted by such corporation with the authority of superintendence, control or command of other persons in the employ or service of such corporation, or with the authority to direct any other employe, in the performance of any duty of such employe, are vice-principals of such corporation, and are not fellow servants with such employe.

Sec. 6659. All persons who are engaged in the common service of such railway corporations, and who, while so engaged, are working together to a common purpose, of same grade, neither of such persons being intrusted by such corporations with any superintendence or control over their fellow employes, are fellow servants with each other; provided, nothing herein

contained shall be so construed as to make employes of such corporation in the service of such corporation fellow servants with other employes of such corporation engaged in any other department or service of such corporation. Employes who do not come within the provisions of this section shall not be considered fellow servants.

Sec. 6660. No contract made between the employer and the employe based upon the contingency of the injury or death of the employe limiting the liability of the employer under this act, or fixing damages to be recovered, shall be valid and binding.

ACTS OF 1907.

CHAPTER 69.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1. All railroad companies operating within this State, whether incorporated or not, and all corporations of every kind and character, and every company, whether incorporated or not, engaged in the mining of coal, who may employ agents, servants or employes, such agents, servants or employes being in the exercise of due care, shall be liable to respond in damages for injuries or death sustained by such agent, employe or servant, resulting from the careless omission of duty or negligence of such employer, or which may result from the carelessness, omission of duty or negligence of any other agent, servant or employe of the said employer, in the same manner and to the same extent as if the carelessness, omission of duty or negligence causing the injury or death was that of the employer.

(The law regulating the working of mines provides that a right of action for direct damages shall accrue to any party injured, or to his heirs if the injury results in death, where the injury is occasioned by a willful violation of the statute, or a willful failure to comply with its provisions. Dig. Stat., Section 5350, amended by acts of 1905, chapter 225.)

CALIFORNIA.

DEERING'S CODES AND STATUTES, 1885.

CIVIL CODE.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1970 (As amended by chapter 97, Acts of 1907). An employer is not bound to indemnify his employe for losses suffered by the latter in consequence of the ordinary risks of the business in which he is employed, nor in consequence of the negligence of another person employed by the same employer in the same general business, unless the negligence causing the injury was committed in the performance of a duty the employer owes by law to the employe, or unless the employer has neglected to use ordinary care in the selection of the culpable employe; provided, nevertheless, that the employer shall be liable for such injury when the same results from the wrongful act, neglect or default of any agent or officer of such

employer, superior to the employe injured, or of a person employed by such employer having the right to control or direct the services of such employe injured, and also when such injury results from the wrongful act, neglect or default of a co-employe engaged in another department of labor from that of the employe injured, or employed upon a machine, railroad train, switch signal point, locomotive engine, or other appliance than that upon which the employe (who) is injured is employed, or who is charged with dispatching trains, or transmitting telegraphic or telephonic orders upon any railroad, or in the operation of any mine, factory, machine shop, or other industrial establishment.

Knowledge by an employe injured of the defective or unsafe character or condition of any machinery, ways, appliances or structures of such employer shall not be a bar to recovery for any injury or death caused thereby, unless it shall also appear that such employe fully understood, comprehended and appreciated the dangers incident to the use of such defective machinery, ways, appliances or structures and thereafter consented to use the same or continued in the use thereof.

When death, whether instantaneous or otherwise, results from an injury to an employe received as aforesaid, the personal representative of such employe shall have a right of action therefor against such employer and may recover damages in respect thereof for and on behalf and for the benefit of the widow, children, dependent parents and dependent brothers and sisters, in order of precedence as herein stated, but no more than one action shall be brought for such recovery.

Any contract or agreement, express or implied, made by any such employe to waive the benefits of this section, or any part thereof, shall be null and void, and this section shall not be construed to deprive any such employe or his personal representative of any right or remedy to which he is now entitled under the laws of this State.

The rules and principles of law as to contributory negligence which apply to other cases shall apply to cases arising under this section, except in so far as the same are herein modified or changed.

Sec. 1791. An employer must in all cases indemnify his employes for losses caused by the former's want of ordinary care.

(Various acts regulating the working of mines provide that violation thereof or willful failure to comply therewith renders persons so offending liable to all damages resulting because of such violation or failure. Acts of March 13, 1872; act of March 27, 1874; acts of 1893, chapter 74.)

COLORADO.

CONSTITUTION.

ARTICLE 15.—CONTRACTS OF EMPLOYES WAIVING RIGHT TO DAMAGES.

Section 15. It shall be unlawful for any person, company or corporation to require of its servants or employes, as a condition of their employ-

ment or otherwise, any contract or agreement whereby such person, company or corporation shall be released or discharged from liability or responsibility on account of personal injuries received by such servants or employes while in the service of such person, company or corporation by reason of the negligence of such person, company or corporation, or the agents or employes thereof, and such contracts shall be absolutely null and void.

MILLS' ANNOTATED STATUTES OF 1891 AND SUPPLEMENT OF 1904.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1511a. Where, after the passage of this act, personal injury is caused to an employe who is himself in the exercise of due care and diligence at the time;

(1) By reason of any defect in the condition of the ways, works or machinery connected with or used in the business of the employer which arose from or had not been discovered or remedied owing to the negligence of the employer, or of any person in the service of the employer, and intrusted by him with the duty of seeing that the ways, works and machinery were in proper condition; or

(2) By reason of the negligence of any person in the service of the employer, intrusted with or exercising superintendence whose sole or principal duty is that of superintendence;

(3) By reason of the negligence of any person in the service of the employer who has the charge or control of any switch, signal, locomotive engine or train upon a railroad, the employe, or in case the injury results in death the parties entitled by law to sue and recover for such damages shall have the same right of compensation and remedy against the employer as if the employe had not been an employe of or in the service of the employer or engaged in his or its work.

Sec. 1511b. The amount of compensation recoverable under this act, in case of a personal injury resulting solely from the negligence of a co-employe, shall not exceed the sum of five thousand dollars. No action for the recovery of compensation for injury or death under this act shall be maintained unless written notice of the time, place and cause of the injury is given to the employer within sixty days, and the action is commenced within two years from the occurrence of the accident causing the injury or death. But no notice given under the provisions of this section shall be deemed invalid or insufficient solely by reason of any inaccuracy in stating the time, place or cause of injury; provided, it is shown that there was no intention to mislead and that the party entitled to notice was not in fact misled thereby.

Sec. 1511c. Whenever an employe enters into a contract, either written or verbal, with an independent contractor, to do part of such employer's work, or whenever such contractor enters into a contract with a subcontractor to do all or a part of the work comprised in such contract or contracts with the employer, such contract or subcontract shall not bar the liability of the employer for injuries to the employe of such contractor or subcontractor, by reason of any defect in the condition of the ways, works,

machinery or plant, if they are the property of the employer or furnished by him, and if such defect arose or had not been discovered or remedied through the negligence of the employer or of some person intrusted by him with the duty of seeing that they were in proper condition.

Sec. 1511d. An employe or those entitled by law to sue and recover, under the provision of this act, shall not be entitled under this act to any right of compensation or remedy against his employer in any case where such employe knew of the defect or negligence which caused the injury and failed within a reasonable time to give or cause to be given information thereof to the employer, or to some person superior to himself in the service of his employer, who had intrusted to him some general superintendence.

Sec. 1511e. If the injury sustained by the employe is clearly the result of the negligence, carelessness or misconduct of a co-employe the co-employe shall be equally liable under the provisions of this act with the employer and may be made a party defendant in all actions brought to recover damages for such injury. Upon the trial of such action the court may submit to and require the jury to find a special verdict upon the question as to whether the employer or his vice-principal was or was not guilty of negligence proximately causing the injury complained of, or whether such injury resulted solely from the negligence of the co-employe, and in case the jury by their special verdict find that the injury was solely the result of the negligence of the employer or vice-principal then and in that case the jury shall assess the full amount of plaintiff's damages against the employer, and the suit shall be dismissed as against the employe; but in case the jury by their special verdict find that the injury resulted solely from the negligence of the co-employe the jury may assess damages both against the employer and the employe.

Sec. 1511f. Every corporation, company or individual who may employ agents, servants or employes, such agents, servants or employes being in the exercise of due care, shall be liable to respond in damages for injuries or death sustained by any such agent, employe or servant resulting from the carelessness, omission of duty or negligence of such employer, or which may have resulted from the carelessness, omission of duty or negligence of any other agent, servant or employe of the said employer in the same manner and to the same extent as if the carelessness, omission of duty or negligence causing the injury or death was that of the employer.

Sec. 1511g. All acts and parts of acts in conflict herewith are hereby repealed; provided, however, that this act shall not be construed to repeal or change the existing laws relating to the right of the persons injured, or in case of death, the right of the husband or wife, or relatives of a deceased person to maintain an action against the employer.

(The law regulating the working of mines provides for a right of action for direct damages against persons violating or willfully failing to comply with said law where such violation or failure results in death. When death ensues the widow or lineal heirs may sue. Section 1392.)

(An act requiring railroad switches to be blocked makes a failure to do so prima facie evidence of negligence where employes or others are injured as a result of such failure. Section 3751e.)

CONNECTICUT.

GENERAL STATUTES OF 1902.

DUTIES OF EMPLOYERS.

Section 4702. It shall be the duty of the master to exercise reasonable care to provide for his servant a reasonably safe place in which to work, reasonably safe appliances and instrumentalities for his work and fit and competent persons for his co-laborers; to exercise reasonable care in the appointment or designation of a vice-principal, and to appoint as such vice-principal a fit and competent person. The default of a vice-principal in the performance of any duty imposed by law on the master shall be the default of the master.

DELAWARE.

(An act requiring air-brakes to be used on passenger trains makes violators thereof liable in damages for injuries resulting from their violation. Act of 1903, Chapter 394.)

FLORIDA.

GENERAL STATUTES OF 1906.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 3148. A railroad company shall be liable for any damage done to persons, stock or other property, by the running of the locomotives, or cars, or other machinery of such company, or for damage done by any person in the employ and service of such company, unless the company shall make it appear that their agents have exercised all ordinary and reasonable care and diligence, the presumption in all cases being against the company.

Sec. 3149. No person shall recover damages from a railroad company for injury to himself or his property, where the same is done by his consent, or is caused by his own negligence. If the complainant and the agents of the company are both at fault, the former may recover, but the damages shall be diminished or increased by the jury in proportion to the amount of default attributable to him.

Sec. 3150. If any person is injured by a railroad company by the running of the locomotives or cars, or other machinery of such company, he being at the time of such injury an employe of the company, and the damage was caused by negligence of another employe, and without fault or negligence on the part of the person injured, his employment by the company shall be no bar to a recovery. No contract which restricts such liability shall be legal or binding.

GEORGIA.

CODE OF 1895.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 2207. Railroad companies are common carriers and liable as such. As such companies necessarily have many employes who can not possibly control those who should exercise care and diligence in the running of trains, such companies shall be liable to such employes as to passengers for injuries arising from the want of such care and diligence.

Sec. 2321. A railroad company shall be liable for any damage done to persons, stock or other property by the running of the locomotives, or cars, or other machinery of such company, or for damage done by any person in the employment and service of such company, unless the company shall make it appear that their agents have exercised all ordinary and reasonable care and diligence, the presumption in all cases being against the company.

Sec. 2322. No person shall recover damage from a railroad company for injury to himself or his property, where the same is done by his consent, or is caused by his own negligence. If the complainant and the agents of the company are both at fault, the former may recover, but the damages shall be diminished by the jury in proportion to the amount of default attributable to him.

Sec. 2323. If the person injured is himself an employe of the company, and the damage was caused by another employe, and without fault or negligence on the part of the person injured, his employment by the company shall be no bar to his recovery.

Sec. 2324 (As amended by Act No. 102, page 63, Acts of 1896). The liability of receivers, trustees, assignees and other like officers operating in this State, or partially in this State, for injuries and damages to persons in their employ, caused by the negligence of co-employes, or for injuries or damages to personal property, shall be the same as the liability now fixed by law governing the operation of railroad corporations in this State for like injuries and damages, and a lien is hereby created on the gross income of any such railroad while in the hands of any such receiver, trustee, or assignee, or other persons in favor of such injured employes or plaintiff, superior to all other liens against defendant under the laws of this State.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 2610. Except in case of railroad companies, the master is not liable to one servant for injuries arising from the negligence or misconduct of other servants about the same business.

Sec. 2611. The master is bound to exercise ordinary care in the selection of servants, and not to retain them after knowledge of incompetency; he must use like care in furnishing machinery equal in kind to that in general use, and reasonably safe for all persons who operate it with ordinary care and diligence. If there are latent defects in machinery, or dangers incident

to an employment unknown to the servant, of which the master knows, or ought to know, he must give the servant warning in respect thereto.

Sec. 2612. A servant assumes the ordinary risks of his employment, and is bound to exercise his own skill and diligence to protect himself. In suits for injuries arising from the negligence of the master in failing to comply with the duties imposed by the preceding section, it must appear that the master knew or ought to have known of the incompetency of the other servant, or of the defects or danger in the machinery supplied; and it must also appear that the servant injured did not know and had not equal means of knowing such fact, and by the exercise of ordinary care could not have known thereof.

Sec. 2613. All contracts between master and servant, made in consideration of employment, whereby the master is exempted from liability to the servant arising from the negligence of the master or his servants, as such liability is now fixed by law, shall be null and void, as against public policy.

Sec. 3030. The principal is not liable to one agent for injuries arising from the negligence or misconduct of other agents about the same business: the exception in case of railroad has been previously stated.

Sec. 3830. If the plaintiff by ordinary care could have avoided the consequences to himself caused by the defendant's negligence, he is not entitled to recover. But in other cases the defendant is not relieved, although the plaintiff may in some way have contributed to the injury sustained.

IDAHO.

ACTS OF 1909.

Section I. Every employer of labor engaged in doing business in this State shall be liable to his employe or servant for a personal injury received by such servant or employe in the service or business of the master or employer within this State when such employe or servant was at the time of the injury in the exercise of due care and diligence in the following cases:

(I) When the injury was caused by reason of any defect in the condition of the ways, works or machinery connected with or used in the business of the employer which arose from or had not been discovered or remedied owing to the negligence of the employer or of any person in the service of the employer and entrusted by him with the duty of seeing that the ways, works or machinery were in proper condition.

(II) When the injury was caused by reason of the negligence of any person in the service of the employer entrusted with and exercising superintendence whose sole or principal duty is that of superintendence, or in the absence of such superintendent, or any person acting as superintendent with the authority and consent of such employer.

(III) When such injury was caused by reason of the act or omission of any person in the service or employment of the master or employer, done or made in obedience to the rules and regulations or by-laws of the master

or employer, or in obedience to particular instructions given by any person delegated with the authority of the master or employer so to instruct.

(IV) When such injury was caused by the negligence of any person in the service or employment of the master or employer who has charge of any signal or telegraph office directing the movement of any locomotive engine, train or car upon a railroad, or of any part thereof, at the time such person was injured.

(V) That any action brought against any employer or master under or by virtue of any of the provisions of this act to recover damages for injuries to or death of any of its employes such employe shall be held to have assumed the risks of his employment in any cases where a violation by such employer or master of any statute enacted for the safety of employes contributed to the injury, or death of such employe.

(VI) An employe, by entering upon or continuing in the service of the employer, shall be presumed to have assented to the necessary risks of the occupation or employment and no others. The necessary risks of the occupation or employment shall, in all cases arising after this act takes effect, be considered as including those risks, and those only, inherent in the nature of the business, which remain after the employer has exercised due care in providing for the safety of his employes and has complied with the laws affecting or regulating such business or occupation for the greater safety of such employe.

Provided, that the master or employer shall not be liable under any of the provisions of this section if the servant or employe knew of the defects or negligence causing the injury, or by the exercise of reasonable care could have known of the defect or negligence causing the injury and failed within a reasonable time to give notice thereof to the master or employer, or to some person superior to himself engaged in the service or employment of the master or employer who had entrusted to him some general superintendence, unless the master or such superior already knew of such defect or negligence.

Provided, also, that the master or employer shall not be liable under any of the provisions of this section where the injury to the employe was caused by the incompetency of a co-employe, and such incompetency was known to the employe injured, and employe injured failed within a reasonable time to give notice thereof to the master or employer or to some person superior to himself engaged in the service or employment of the master or employer who had entrusted to him some general superintendence, unless the master or employer or such superior already knew of such incompetency of such co-employe, and such master or employer failed or refused to discharge such incompetent employe or failed or refused to investigate the alleged incompetency of the co-employe and discharge him if found incompetent.

Sec. 2. In the case of injury to an employe who is a minor, then the father, or in case of his death or the desertion of his family, the mother may maintain an action for injuries received for which the master is liable under the provisions of this act, unless the said minor be married, in which case the said minor may maintain an action in his own name for the said

injuries, and a guardian may, under like circumstances, maintain an action for the injury of his ward, and in the event that the said minor be not married and have no father or mother dependent upon him the said action may be maintained by a guardian to be appointed by the court for the benefit of the said minor. In case the said injuries result in the death of the said minor and the said minor be married, then the action may be maintained by the widow and guardian of the said minor's children, if any there be, and if the said minor be unmarried, then the father, or in case of his death or desertion of his family, the mother may maintain an action for the death of said minor resulting under such circumstances; and if neither father nor mother survive the said minor the action may be brought by the next of kin who at the time of his death were dependent upon his wages for support, or by personal representatives of the minor for the benefit of such next of kin who at the time of the death of the minor were dependent upon his wages for support.

Sec. 3. In case the employe be not a minor and the injuries result in his death, then an action may be maintained by the widow of the deceased, or if he leaves no widow, his next of kin who at the time of his death were dependent upon his wages for support, or by his personal representative for the benefit of his heirs or next of kin for damages against the employer under the circumstances mentioned in this act.

Sec. 4. The amount of damages to be recovered in the case of death shall not exceed the sum of five thousand dollars (\$5,000.00).

The damages recovered on account of death shall not be subject to the debts of the deceased.

Sec. 5. No action for the recovery of compensation for injuries or death under this act shall be maintained unless notice of the time, place and cause of the injury is given to the employer within one hundred and fifty (150) days, and the action is commenced within one (1) year after the occurrence of the accident causing the injury or death. The notice required by this section shall be in writing and shall be signed by the person injured or by some one in his behalf, but if from physical or mental incapacity it is impossible for the person injured to give notice within the time provided in this section he may give the same within ten (10) days after such incapacity is removed. In case of his death without having given such notice his executor or administrator or widow or next of kin may give such notice within sixty (60) days after such death, but no notice under the provisions of this section shall be deemed to be invalid or insufficient solely by reason of any inaccuracy in stating the time, place or cause of the injury, if it be shown that there was no intention to mislead and the party entitled to notice was not in fact misled thereby. The notice required by this section shall be served in the same manner as required of the service of summons in civil actions.

Sec. 6. The acts and parts of acts in conflict herewith are hereby repealed.

Sec. 7. Whereas, an emergency exists this act shall be in effect from and after its passage and removal.

ILLINOIS.

The railroad safety appliance law of 1905 takes away the defenses of assumed risks and of contributory negligence where an employe is injured because of the company's non-compliance with the law, though the employe knew of it.

INDIANA.

ANNOTATED STATUTES OF 1894—REVISION OF 1901.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES—CONTRIBUTORY NEGLIGENCE TO BE MATTER OF DEFENSE ONLY.

Section 359a. Hereafter in all actions for damages brought on account of the alleged negligence of any person, co-partnership or corporation for causing personal injuries, or the death of any person, it shall not be necessary for the plaintiff in such action to allege or prove the want of contributory negligence on the part of the plaintiff, or on the part of the person for whose injury or death the action may be brought. Contributory negligence, on the part of the plaintiff, or such other person, shall be a matter of defense, and such defense may be proved under the answer of general denial.

CONTRACTS OF EMPLOYEES WAIVING RIGHT TO DAMAGES.

Section 7082a. All contracts between employer and employe releasing the employer from liability for damages arising out of the negligence of the employer by which the employe is injured, or in case of the employe's death to his representatives, are against public policy, and hereby declared null and void.

Sec. 7082b. All contracts between employer and employe releasing third persons, co-partnerships or corporations from liability for damages arising out of the negligence of such third persons, co-partnerships or corporations by which the employe of such employer is injured, or in the case of the death of such employe, to his representatives, are against public policy and hereby declared null and void.

Sec. 7082c. All contracts between an employe and a third person, co-partnership or corporation in which it is agreed that the employer of such employe shall be released from liability for damages of such employe arising out of the negligence of the employer, or in case of the death of such employe, to his representatives, are against public policy and are hereby declared null and void; provided, that nothing in this act shall apply to voluntary relief departments, or associations organized for the purpose of insuring employes. Nothing in this act shall be construed to revert back to contracts made prior to the passage of this act. Nor shall this act affect pending litigation; provided, that nothing in any section of this act shall be so construed as to affect or apply to any contract or agreement that may

be made between the employer and employe, or in case of death, his next of kin or his representative, after an injury to the employe has occurred, but the provisions of this act shall apply solely to contracts made prior to any injury.

LIABILITY OF RAILROAD COMPANIES, ETC., FOR INJURIES TO EMPLOYEES.

Section 7083. Every railroad or other corporation, except municipal, operating in this State, shall be liable for damages for personal injury suffered by an employe while in its service, the employe so injured being in the exercise of due care and diligence, in the following cases:

First. When such injury is suffered by reason of any defect in the condition of the ways, works, plant, tools and machinery connected with or in use in the business of such corporation, when such defect was the result of negligence on the part of the corporation, or some person intrusted by it with the duty of keeping such ways, works, plant, tools or machinery in proper condition.

Second. Where such injury resulted from the negligence of any person in the service of such corporation, to whose order or direction the injured employe at the time of the injury was bound to conform and did conform.

Third. Where such injury resulted from the act or omission of any person done or made in obedience to any rule, regulation or by-law of such corporation, or in obedience to the particular instructions given by any person delegated with the authority of the corporation in that behalf.

Fourth. Where such injury was caused by the negligence of any person in the service of such corporation who has charge of any signal, telegraph office, switch yard, shop, roundhouse, locomotive engine or train upon a railway, or where such injury was caused by the negligence of any person, co-employe or fellow servant engaged in the same common service in any of the several departments of the service of any such corporation, the said person, co-employe or fellow servant, at the time acting in the place, and performing the duty of the corporation in that behalf, and the person so injured, obeying or conforming to the order of some superior at the time of such injury, having authority to direct; but nothing herein shall be construed to abridge the liability of the corporation under existing laws.

Sec. 7085. The damages recoverable under this act shall be commensurate with the injury sustained unless death results from such injury, when, in such case, the action shall survive and be governed in all respects by the law now in force as to such action; provided, that where any such person recovers a judgment against a railroad or other corporation, and such corporation takes an appeal, and, pending such appeal, the injured person dies, and the judgment rendered in the court below be thereafter reversed, the right of action of such person shall survive to his legal representative.

Sec. 7087. All contracts made by railroads or other corporations with their employes, or rules or regulations adopted by any corporation releasing or relieving it from liability to any employe having a right of action under the provisions of this act are hereby declared null and void. The provisions of this act shall not apply to any injuries before it takes effect, nor shall

it affect in any manner any suit or legal proceedings pending at the time it takes effect.

(A provision of this act requiring steam railroads to be equipped with switch lights makes a company violating or failing to comply with the law liable to all persons and employes injured by reason of non-compliance, and takes away the defense of assumption of risk. Section 7173c.

A similar provision appears in a statute directing the equipment of railroad locomotives with engine brakes, the use of automatic couplers, and the placing of grab irons on cars. Act of 1903, Chapter 120.

So also of the safety appliance law of 1907. Acts of 1907, Chapter 118; and the act regulating hours of labor of railroad employes. Acts of 1907, Chapter 131.

The statute requiring fire escapes to be placed on factories, etc., makes owners who fail to comply with its terms liable in damages for the personal injury or death of any person occasioned by fire in a building not provided with fire escapes. Acts of 1903, Chapter 222.

The statute regulating the working of coal mines gives a right of action against the operator of a mine for injuries occasioned by any violation of the act, or willful failure to comply with its provisions. Acts of 1905, Chapter 50.)

IOWA.

CODE OF 1897 AND SUPPLEMENT OF 1902.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYES.

Section 2071. Every corporation operating a railway shall be liable for all damages sustained by any person, including employes of such corporation, in consequence of the neglect of the agents, or by any mismanagement of the engineers or other employes thereof, and in consequence of the willful wrongs, whether of commission or omission, of such agents, engineers or other employes, when such wrongs are in any manner connected with the use and operation of any railway on or about which they shall be employed, and no contract which restricts such liability shall be legal or binding.

Nor shall any contract of insurance, relief, benefit or indemnity in case of injury or death, entered into prior to the injury, between the person so injured and the corporation, or any other person or association acting for such corporation, nor shall the acceptance of any such insurance, relief, benefit or indemnity by the person injured, his widow, heirs or legal representatives after the injury, from such corporation, person or association, constitute any bar or defence to any cause of action brought under the provisions of this section, but nothing contained herein shall be construed to prevent or invalidate any settlement for damages between the parties subsequent to injuries received.

(The statute directing the use of power brakes and automatic couplers on railroad trains abrogates the defense of assumed risks in cases of injury to employes occasioned by failure to comply with the law. Sec. 2083.

Failure to comply with the requirements of the law regulating the working of mines is declared to be culpable negligence in cases of injury resulting therefrom. Section 2492.)

ACT OF 1909.

"That in all cases where the property, works, machinery or appliances of an employer are defective or out of repair, and where it is the duty of the employer, from the character of the place, work, machinery or appliances, to furnish reasonably safe machinery, appliances or place to work, the employe shall not be deemed to have assumed the risk by continuing in the prosecution of the work, growing out of any defect as aforesaid, of which the employe may have had knowledge when the employer had knowledge of such defect, except when, in the usual and ordinary course of his employment, it is the duty of such employe to make the repairs or remedy the defects. Nor shall the employe, under such conditions, be deemed to have waived the negligence, if any, unless the danger be imminent and to such an extent that a reasonably prudent person would not have continued in the prosecution of the work; but this statute shall not be construed so as to include such risks as are incident to the employment. And no contract which restricts liability hereunder shall be legal or binding."

KANSAS—1909.

DEFINING THE LIABILITY OF EMPLOYERS OF LABOR IN CASE OF INJURY OR DEATH TO THEIR EMPLOYEES.

Section 1. Definitions: The word "railroad, railroad company or corporation," as used in this act, shall be held to mean steam surface railroads, street railroads and interurban railroads; the word "mine," as used in this act, shall be held to mean "subterranean mines and quarries"; the word "factory" and "workshop," as used in this act, shall be given the meaning prescribed in section 6650 of the General Statutes of 1901.

Sec. 2. That every railroad company or corporation, and every person, association of persons, or corporation, owning or operating any mine, factory, workshop, packing-house, packing-plant, and every person, association of persons, or corporation engaged in the erection or repairing of buildings or bridges where machinery or hoists are used in the construction and erection of the same, shall be liable in damages to any person suffering injury while such person is employed by and working in the employment of any of the persons, associations of persons, or corporations, or companies above mentioned, or in case of death of such employe, for such injury or death, resulting in whole or in part from the negligence of the employer or its officers, agents, servants or other employes or by reason of any defect or

insufficiency in the ways, works, machinery or other equipment of said employer, due to the negligence of said employer, its officers, agents, servants or other employes, and such cause of action may be maintained in the manner and by and for the benefit of any of the parties as is now or as may be hereafter provided by law.

Sec. 3. That in all actions hereafter brought against any employer mentioned in section 2 of this act, under or by virtue of any of the provisions of this act, or of any act amendatory hereof, to recover damages for personal injuries to any employe that have resulted in his or her death, the fact that the employe may have been guilty of contributory negligence shall not of itself bar a recovery, unless the contributory negligence of the employe shall be found by the jury or the court trying the cause to have contributed more to the injury than the negligence of the defendant, and if the claimant shall be found to be entitled to recover then the contributory negligence of said employe shall be considered in assessing the amount of recovery; provided, that no such employe who may be injured or killed shall be held to have been guilty of contributory negligence in any case where the violation by such employer, its officers, agents, servants or other employes of any statutes enacted for the safety of employes or any duty imposed by the common law contributed to the injury or death of such employe. All questions of negligence and contributory negligence shall be submitted to the jury, where the case is tried before a jury.

Sec. 4. That in any action brought against any employer of labor in the State of Kansas under or by virtue of any of the provisions of this act to recover damages for injuries to or for the death of any of their employes such employe shall not be held to have assumed the risk of his employment in any case where the violation by such employer, its officers, agents, servants or other employes of any statute enacted for the safety of employes or of any duty imposed by the common law contributed to the injury or death of such employe.

Sec. 5. That any contract, rule, regulation, agreement or device whatsoever, the purpose or effect of which shall be to enable any employer, its officers, agents, servants or other employe, to exempt themselves from any liability created by this act, shall to that extent be void; provided, that in any action brought against such employer, its officers, agents, servants or other employes, under or by virtue of any of the provisions of this act, such employer, its officers, agents, servants or other employes, may set off therein any sum which they have contributed or paid as an insurance, relief benefits or indemnity to the injured employe or to the person entitled thereto on account of the injury or death for which such action was brought.

Sec. 6. That no action shall be maintained or recovery had under the provisions of this act unless such action shall have been commenced within two years from the day on which the cause of action accrued; provided, that if in any action brought in or removed to the Federal court for injury or death of an employe occurring within the State of Kansas such Federal court shall decide that the action is not maintainable in the Federal court, the limitation for commencing such action in this State shall not run during the time said case is pending in such Federal court, and the determination

of the Federal court that such action is not maintainable in the Federal courts shall be sufficient adjudication to justify the plaintiff to commence his action for damages for such injury or death occurring in this State in any court of competent jurisdiction within the State of Kansas.

Sec. 7. That nothing in this act shall be held to limit the duty or liability of such employer, its officers, agents, servants or other employes, or to impair the rights of their employes under any act or acts of Congress or to affect the prosecution of any pending proceedings or rights of action under the act of Congress, entitled "An act relating to liability of common carriers in the District of Columbia and Territories and common carriers engaged in commerce between the States and between the States and foreign nations to servants or other employes, or to impair the rights of their employes under any their employes," or to limit the duty or liability of its officers, agents, servants or other act or acts of the State of Kansas or under the common law, or to affect the prosecution of any pending proceeding or of any right of action already accrued under any other act or acts of the State of Kansas or under the common law.

(An act requiring the installation of fire escapes on factories, and of safety devices in manufacturing establishments, authorizes an action for injuries or death resulting from disregard by the employer of the provisions of the act. Acts of 1903, Chapter 356.)

KENTUCKY.

(An act regulating the construction of railroad bridges and tunnels, and directing the use of air brakes on railroad trains and the blocking of frogs at switches, makes the company liable for injuries resulting from a failure or neglect to comply with the provisions of the law. Statutes of 1903, section 793.)

LOUISIANA.

REVISED CIVIL CODE-EDITION OF 1887.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Article 2316. Every person is responsible for the damage he occasions, not merely by his act, but by his negligence, his imprudence or his want of skill.

Art. 2317. We are responsible, not only for the damage occasioned by our own act, but for that which is caused by the act of persons for whom we are answerable, or of the things which we have in our custody.

Art. 2320. Masters and employers are answerable for the damage occasioned by their servants and overseers in the exercise of functions in which they are employed.

Teachers and artisans are answerable for the damage caused by their scholars or apprentices while under their superintendence.

In the above cases responsibility only attaches, when the masters or employers, teachers and artisans, might have prevented the act which caused the damages and have not done it.

MARYLAND.

PUBLIC LOCAL LAWS—CODE OF 1888.

ARTICLE 1.—LIABILITY OF OPERATORS, ETC., OF MINES FOR INJURIES TO EMPLOYEES.

Section 195a (Added by Chapter 412, Acts of 1902). Any corporation, partnership, association, individual, individuals, engaged in the business of owning or conducting any coal mines, clay mines in Alleghany or Garrett counties whether such owner or owners, operator or operators be residents of the State of Maryland or not, employing persons in the operation of mining coal or clay, shall be liable in law to any employe engaged in such occupation or to his legal representatives, in case of death, for the damage arising and flowing from any injury received by said employe through the negligence of said owner or operator or from the negligence of any agent or agents, employe or employes, and if the negligence causing such injury be found to consist of the joint or collective negligency of both the employer, his agent or agents, employe or employes, on the one hand, and of the negligence of the injured employe on the other hand, then it shall be the duty of the jury, or of the court sitting as a jury, to determine and ascertain as near as may be the proportion of such negligence of which each has been guilty, and having ascertained and determined such proportions of negligence causing the injury, it shall be the duty of the jury, or of the court sitting as a jury, to apportion the damages arising from said injury in like proportion or degree and award to the plaintiff or plaintiffs the proportion of damages suffered which it shall have been determined was the proportion of the defendant or defendants' negligence contributing to the injury complained of.

(The statute regulating the operators of mines in Alleghany and Garrett counties makes owners or operators who fail to comply therewith liable in damages for injury or death occasioned by such failure.)

MASSACHUSETTS.

REVISED LAWS OF 1902.

CHAPTER 106.—CONTRACTS OF EMPLOYEES WAIVING RIGHT TO DAMAGES.

Section 16. No person shall, by a special contract with his employes, exempt himself from liability which he may be under to them for injuries suffered by them in their employment and resulting from the negligence of the employer or of a person in his employ.

CHAPTER 100.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 71. If personal injury is caused to an employe, who, at the time of the injury, is in the exercise of due care, by reason of:

First. A defect in the condition of the ways, works or machinery connected with or used in the business of the employer, which arose from, or had not been discovered or remedied in consequence of, the negligence of the employer or of a person in his service who had been intrusted by him with the duty of seeing that the ways, works or machinery were in proper condition; or

Second. The negligence of a person in the service of the employer who was intrusted with and was exercising superintendence and whose sole or principal duty was that of superintendence, or, in the absence of such superintendent, of a person acting as superintendent with the authority or consent of such employer; or,

Third. The negligence of a person in the service of the employer who was in charge or control of a signal, switch, locomotive engine or train upon a railroad;

The employee, or his legal representatives, shall, subject to the provisions of the eight following sections, have the same rights to compensation and of action against the employer as if he had not been an employe, nor in the service, nor engaged in the work of the employer.

A car which is in use by, or which is in possession of, a railroad corporation shall be considered as a part of the ways, works or machinery of the corporation which uses or has it in possession, within the meaning of clause one of this section, whether it is owned by such corporation or by some other company or person. One or more cars which are in motion, whether attached to an engine or not, shall constitute a train within the meaning of clause three of this section, and whoever, as a part of his duty for the time being, physically controls or directs the movements of a signal, switch, locomotive engine or train shall be deemed to be a person in charge or control of a signal, switch, locomotive engine or train within the meaning of said clause.

Sec. 72 (As amended by Chapter 370, Acts of 1906). If the injury described in the preceding section results in the death of the employe, and such death is not instantaneous or is preceded by conscious suffering, and if there is any person who would have been entitled to bring an action under the provisions of the following section, the legal representative of said employe may, in the action brought under the provisions of the preceding section, recover damages for the death in addition to those for the injury; and in the same action, under a separate count at common law, may recover damages for conscious suffering resulting from the same injury.

Sec. 73. If, as the result of negligence of an employer himself, or of a person for whose negligence an employer is liable under the provisions of section seventy-one, an employe is instantly killed, or dies without conscious suffering, his widow, or, if he leaves no widow, his next of kin, who, at the time of his death, were dependent upon his wages for support, shall have a right of action for damages against the employer.

Section 74. If, under the provisions of either of the two preceding sections, damages are awarded for the death, they shall be assessed with reference to the degree of culpability of the employer or of the person for whose negligence the employer is liable.

The amount of damages which may be awarded in an action under the provisions of section seventy-one for a personal injury to an employe, in which no damages for his death are awarded under the provisions of section seventy-two, shall not exceed four thousand dollars.

The amount of damages which may be awarded in such action, if damages for his death are awarded under the provisions of section seventy-two, shall not exceed five thousand dollars for both the injury and the death, and shall be apportioned by the jury between the legal representatives of the employe and the persons who would have been entitled, under the provisions of section seventy-three, to bring an action for his death if it had been instantaneous or without conscious suffering.

The amount of damages which may be awarded in an action brought under the provisions of section seventy-three shall not be less than five hundred nor more than five thousand dollars.

Sec. 75. No action for the recovery of damages for injury or death under the provisions of sections seventy-one to seventy-four, inclusive, shall be maintained unless notice of the time, place and cause of the injury is given to the employer within sixty days, and the action is commenced within one year after the accident which caused the injury or death. Such notice shall be in writing, signed by the person injured or by a person in his behalf; but if from mental or physical incapacity it is impossible for the person injured to give the notice within the time provided in this section, he may give it within ten days after such incapacity has been removed, and if he dies without having given the notice and without having been for ten days at any time after his injury of sufficient capacity to give it, his executor or administrator may give such notice within sixty days after his appointment. A notice given under the provisions of this section shall not be held invalid or insufficient solely by reason of an inaccuracy in stating the time, place or cause of the injury, if it is shown that there was no intention to mislead, and that the employer was not in fact misled thereby. The provisions of section twenty-two of chapter fifty-one shall apply to notices under the provisions of this section.

Sec. 76. If an employer enters into a contract, written or verbal, with an independent contractor to do part of such employer's work, or if such contractor enters into a contract with a subcontractor to do all or part of the work comprised in such contractor's contract with the employer, such contract or subcontract shall not bar the liability of the employer for injuries to the employes of such contractor or subcontractor, caused by any defect in the condition of the ways, works, machinery or plant, if they are the property of the employer or are furnished by him and if such defect arose, or had not been discovered or remedied, through the negligence of the employer or of some person intrusted by him with the duty of seeing that they were in proper condition.

Sec. 77. An employe or his legal representatives shall not be entitled under the provisions of sections seventy-one to seventy-four, inclusive, to any right of action for damages against his employer if such employe knew of the defect or negligence which caused the injury, and failed within a reasonable time to give, or cause to be given, information thereof to the employer, or to some person superior to himself in the service of the employer who was intrusted with general superintendence.

Sec. 78. An employer who shall have contributed to an insurance fund created and maintained for the mutual purpose of indemnifying an employe for personal injuries for which compensation may be recovered under the provisions of sections seventy-one to seventy-four, inclusive, or to any relief society formed under the provisions of sections seventeen, eighteen and nineteen of chapter one hundred and twenty-five, may prove in mitigation of the damages recoverable by an employe under the provisions of said sections, such proportion of the pecuniary benefit which has been received by such employe from any such fund or society on account of such contribution of said employer, as the contribution of such employer to such fund or society bears to the whole contribution thereto.

Sec. 79. The provisions of the eight preceding sections shall not apply to injuries caused to domestic servants or farm laborers by fellow employes.

(The law regulating the construction of buildings to be used as factories, etc., and their equipment with fire escapes and fire extinguishers, makes negligent owners, lessees or occupants liable to any person injured for all damages caused by violation of its provisions. Chapter 104, section 50.

The act directing the installation and use of safety appliances on railroads takes away from the negligent company the defense of assumed risks in cases of injury resulting from violations of the act, even though the injured employe knew of the violation. Chapter 111, section 209.)

MINNESOTA.

REVISED LAWS—1905.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYES.

Section 2042. Every company owning or operating, as a common carrier or otherwise, a railroad shall be liable for all damages sustained within this State by any agent or servant thereof, without contributory negligence on his part, by reason of the negligence or any other servant thereof, and no contract, nor any rule or regulation of such company, shall impair or limit such liability. But this section shall not be so construed as to render any railroad company liable for damages sustained by any such agent or servant while engaged in the construction of a new road, or any part thereof, not open to public travel or use.

MISSISSIPPI.

CONSTITUTION.

ARTICLE 7.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 193. Every employe of any railroad corporation shall have the same right and remedies for any injuries suffered by him from the act or omission of said corporation or its employes, as are allowed by law to other persons not employes, where the injury results from the negligence of a superior agent or officer, or of a person having the right to control or direct the services of the party injured, and also when the injury results from the negligence of a fellow servant engaged in another department of labor from that of the party injured, or of a fellow servant on another train of cars, or one engaged about a different piece of work. Knowledge by an employe injured, of the defective or unsafe character or condition of any machinery, ways or appliances, shall be no defense to any action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars, or engines voluntarily operated by them. Where death ensues from any injury to employes the legal or personal representatives of the person injured shall have the same right and remedies are allowed by law to such representatives of other persons. Any contract or agreement, express or implied, made by an employe to waive the benefit of this section shall be null and void, and this section shall not be construed to deprive any employe of a corporation or his legal representative of any right or remedy that he now has by the law of the land. The Legislature may extend the remedies herein provided for to any other class of employes.

CODE OF 1906.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1985. In all actions against railroad companies for damages done to persons or property, proof of injury inflicted by the running of the locomotive or cars of such company shall be prima facie evidence of the want of reasonable skill and care on the part of the servants of the company in reference to such injury. This section shall also apply to passengers and employes of railroad companies.

Sec. 4056. Every employe of a railroad corporation shall have the same rights and remedies for an injury suffered by him from the act or omission of the corporation or its employes as are allowed by law to other persons not employes, where the injury results from the negligence of a superior agent or officer, or of a person having the right to control or direct the services of the party injured, and also when the injury results from the negligence of a fellow servant engaged in another department of labor from that of the party injured, or of a fellow servant on another train of cars, or one engaged about a different piece of work. Knowledge by an employe injured of the defective or unsafe character or condition of any machinery, ways or appliances, or of the improper loading of cars, shall not be a de-

fense to an action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them. When death ensues from an injury to an employe an action may be brought in the name of the widow of such employe for the death of the husband, or by the husband for the death of his wife, or by (for) the death of a child, or in the name of the child for the death of an only parent, for such damages as may be suffered by them respectively by reason of such death, the damages to be for the use of such widow, husband or child, except that in case the widow should have children the damages shall be distributed as personal property of the husband. The legal or personal representatives of the person injured shall have the same rights and remedies as are allowed by law to such representatives of other persons. In every such action the jury may give such damages as shall be fair and just, with reference to the injury resulting from such death to the person suing. Any contract or agreement, expressed or implied, made by an employe to waive the benefit of this section shall be null and void; and this section shall not deprive an employe or a person, natural or artificial, or the legal or personal representatives of such person, of any right or remedy they now have by law.

(A statute that requires tell-tales or warning strings to be placed over railroad tracks at approaches to overhead bridges or other overhanging objects makes negligent companies liable for the injury or death of a person caused by striking such bridge, etc., even though the person so killed or injured was guilty of contributory negligence. Section 4051.)

MISSOURI.

REVISED STATUTES OF 1899.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 2873. Every railroad corporation owning or operating a railroad in this State shall be liable for all damages sustained by any agent or servant thereof while engaged in the work of operating such railroad by reason of the negligence of any other agent or servant thereof. Provided, that it may be shown in defense that the person injured was guilty of negligence contributing as a proximate cause to produce the injury.

Sec. 2784. All persons engaged in the service of any such railroad corporation doing business in this State, who are intrusted by such corporation with the authority of superintendence, control or command of other persons in the employ or service of such corporation, or with the authority to direct any other servant in the performance of any duty of such servant, or with the duty of inspection or other duty owing by the master to the servant, are vice-principals of such corporation, and are not fellow servants with such employes.

Sec. 2785. All persons who are engaged in the common service of such railroad corporation, and who while so engaged are working together at the

same time and place, to a common purpose of same grade, neither of such persons being intrusted by such corporation with any superintendence or control over their fellow employes, are fellow servants with each other; provided, that nothing herein contained shall be so construed as to make any agent or servant of such corporation in the service of such corporation a fellow servant with any other agent or servant of such corporation engaged in any other department or service of such corporation.

Sec. 2786. No contract made between any railroad corporation and any of its agents or servants, based upon the contingency of the injury or death of any agent or servant, limiting the liability of such railroad corporation for any damages under the provisions of this act, shall be valid or binding, but all such contracts or agreements shall be null and void.

Sec. 2786a (Added by act, page 138, Acts of 1905). Whenever the words "railroad companies" or "railroad corporation" shall be found in any section of this chapter it shall be taken and construed to include all companies, corporations, person or persons operating any railroad in this State, and wherever the word "railroad" occurs in any section in this chapter it shall be taken and construed to include all railroads operated in this State by whatever motive or power propelled, and shall include all railroads or railways, commonly known as street railways, and all railroads operated by terminal companies or associations, known as "terminal railroads" or "railways" as well as all railways or railroads operated anywhere in the State, commonly known as electric railroads, whether they be wholly or in part in the city or country districts. Also all railroads within the country or city operated by what is commonly known as cable or motor power, or by horse power.

ACTS OF 1907.

LIABILITY OF MINE OPERATORS FOR INJURY TO EMPLOYEES.

(Page 251.)

Section 1. Every person, company, or corporation operating a mine or mines in this State producing lead, zinc, coal or other valuable minerals, shall be liable for all damages sustained by any agent or servant thereof while engaged in operating such mine or mines, by reason of the negligence of any other agent or servant thereof; provided, that it may be shown in defence that the person injured was guilty of negligence contributing as a proximate cause to produce the injury.

Sec. 2. All persons engaged in the service of any such person, company or corporation doing business in this State, who are intrusted by such person, company or corporation with the authority of superintendence, control or command of other persons in the employ or service of such person, company or corporation, or with authority to direct any other servant in the performance of any duty of such servant, or with the duty of inspection or other duty owing by the master to the servant, are vice-principals of such person, company or corporation, and are not follow servants with such employes.

Sec. 3. All persons who are engaged in the common service of such person, company or corporation operating a mine or mines, and while so

engaged are working together at the same time and place to a common purpose of the same grade, neither of such persons being intrusted by such person, company or corporation with any superintendence or control over their fellow employes, are fellow servants with each other.

Sec. 4. No contract made between any person, company or corporation so operating such mine or mines and their agents or servants, based upon the contingency of the injury or death to any such agent or servant, limiting the liability of the employer for any damages under the provisions of this act, shall be valid or binding, but all such contracts or agreements shall be null and void.

Sec. 4a. Nothing in this act shall be so construed as applying to or including the operation, construction or repairing of concentrating mills, flumes or tramways wholly above ground.

(The law regulating the working of mines provides that a right of action shall accrue to persons injured or to the heirs or dependents of persons killed because of a failure of the owner or operator to comply with its provisions. Revised Statutes, Section 8820.

Laws requiring railroad companies to block switches, frogs, and guard rails, and also to provide automatic couplers, drivewheel power brakes, and safety appliances on railroad trains take away from companies failing to comply with such laws the defence of contributory negligence in actions for damages where the employe is injured by the company's neglect in these particulars. In the latter law also the employe shall not be deemed to have assumed the risks occasioned by the company's neglect. Acts of 1907, act, page 181; act, page 182.)

MONTANA.

CONSTITUTION.

ARTICLE 15.—CONTRACTS OF EMPLOYES WAIVING RIGHT TO DAMAGES.

Section 16. It shall be unlawful for any person, company or corporation to require of its servants or employes, as a condition of their employment or otherwise, any contract or agreement, whereby such persons, company or corporation, shall be released or discharged from liability or responsibility on account of personal injuries received by such servants or employes while in the service of such person, company or corporation, by reason of the negligence of such person, company or corporation, or the agents or employes thereof, and such contracts shall be absolutely null and void.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYES.

Section 2660. An employer must indemnify his employe, except as prescribed in the next section, for all that he necessarily expends or loses in direct consequence of the discharge of his duties as such, or of his obedience to the directions of the employer, even though unlawful, unless the employe, at the time of obeying such directions, believed them to be lawful.

Sec. 2661. An employer is not bound to indemnify his employe for losses suffered by the latter in consequence of the ordinary risks of the business in which he is employed.

Sec. 2062. An employer must in all cases indemnify his employe for losses caused by the former's want of ordinary care.

ACTS OF 1905.

CHAPTER 1. LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1. Every person or corporation operating a railway or railroad in this State shall be liable for all damages sustained by an employe of such person or corporation in consequence of the neglect of any other employe or employes thereof, or by the mismanagement of any other employe or employes thereof, and in consequence of the willful wrongs, whether of commission or omission, of any other employe or employes thereof, when such neglect, mismanagement or wrongs are in any way connected with the use and operation of any railway or railroad on or about which they shall be employed, and no contract which restricts such liability shall be legal or binding.

Sec. 2. In case of the death of any such employe in consequence of any injury or damage so sustained, the right of action shall survive and may be prosecuted and maintained by his heirs or personal representatives.

CHAPTER 23.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1. Every company, corporation, or individual operating any mine, smelter, or mill for the refining of ores shall be liable for any damages sustained by any employes thereof within this State, without contributing negligence on his part, when such damage is caused by the negligence of any superintendent, foreman, shift boss, hoisting, or other engineer, or crane men.

Sec. 2. No contract of insurance, relief, benefit, or indemnity in case of injury or death, nor any other contract entered into before the jury, between the person injured and any of the employers named in this act shall constitute any bar or defence to any cause or action brought under the provisions of this act.

Sec. 3. In case of the death of any such employes in consequence of any injury or damages so sustained, the right of action shall survive and may be prosecuted and maintained by its heirs, or personal representatives.

NEBRASKA.

ACTS OF 1907.

CHAPTER 48.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1. Every railway company operating a railway engine, car or train in the State of Nebraska shall be liable to any of its employes, who at

the time of injury are engaged in construction or repair work, or in the use and operation of any engine, car or train for said company, or, in the case of his death, to his personal representatives for the benefit of his widow and children, if any, if none, then to his parents, if none, then to his next of kin dependent upon him, for all damages which may result from negligence of any of its officers, agents, or employes, or by reason of any defects or insufficiency due to its negligence in its cars, engines, appliances, machinery, track, roadbed, ways or works.

Sec. 2. In all actions hereafter brought against any railway company to recover damages for personal injuries to an employe, or when such injuries have resulted in his death, the fact that the employe may have been guilty of contributory negligence shall not bar a recovery when his contributory negligence was slight and that of the employer was gross in comparison, but damages shall be diminished by the jury in proportion to the amount of negligence attributable to such employe, all questions of negligence and contributory negligence shall be for the jury.

Sec. 3. No contract of employment, insurance, relief benefit, or indemnity for injury or death hereafter entered into by or on behalf of any employe nor the acceptance of any such insurance, relief benefit, or indemnity by the person entitled thereto, shall constitute any bar or defence to any action brought to recover damages for personal injuries to or death of such employe; provided, however, that upon the trial of such action against any railway company the defendant may set off any sum it has contributed toward any such insurance, relief benefit, or indemnity that may have been paid to the injured employe, or in case of his death, to his personal representatives.

(The statute directing the use of automatic couplers and power brakes on railroad trains provides that employes injured because of violation of the law should not be considered as waiving rights to recover damages by continuing in the service of the negligent company. Compiled Statutes of 1881, Tenth Edition, section 1799.)

NEVADA.

ACTS OF 1905.

CHAPTER 142.—RIGHT OF ACTION FOR PERSONAL INJURIES.

Section 1. Whenever any person shall suffer personal injury by wrongful act, neglect or default of another, the person causing the injury shall be liable to the person injured for damages; and where the person causing such injury is employed by another person or corporation responsible for his conduct such person or corporation so responsible shall be liable to the person injured for damages.

Sec. 2. Such liability, however, where not discharged by agreement and settlement shall exist only in so far as the same shall be ascertained and adjudged by a State or Federal court of competent jurisdiction in this State in an action brought for that purpose by the person injured.

ACTS OF 1907.

CHAPTER 214. - LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1. Every common carrier engaged in trade or commerce in the State of Nevada, and every mine and mill owner and operator actually engaged in mining, or in milling or reduction of ores, in the State of Nevada, shall be liable to any of its employes, or, in case of the death of such employe, to his personal representative for the benefit of his widow and children, if any, and if none, then for his next of kin, for all damages which may result from the negligence of the officers, agents or employes of said common carrier or mine or mill operator, or by reason of any defect or insufficiency due to their negligence in its cars, engines, appliances, machinery, track, roadbed, ways or works, or to their negligent handling or storing of explosives.

Sec. 2. In all actions hereinafter brought against any common carrier or mine or mill owner and operator to recover damages for personal injuries to or death of an employe, the fact that the employe may have been guilty of contributory negligence shall not bar a recovery where his contributory negligence was slight and the negligence of the employer, or its officers, agents or employes was gross in comparison. All questions of negligence and contributory negligence shall be for the jury.

Sec. 3. No contract of employment, insurance, relief benefit or indemnity for injury or death, entered into by or on behalf of any employe, nor the acceptance of any insurance, relief benefit or indemnity by the person entitled thereto, shall constitute any bar or defense to any action brought to recover damages for personal injuries to or death of such employe; provided, however, that upon the trial of such action the defendant may set off therein any sum it has contributed toward any such insurance, relief benefit or indemnity that may have been paid to the person entitled thereto.

NEW JERSEY.

EFFECTIVE SEPTEMBER 1, 1909.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES IN CERTAIN CASES.

Where, after this act takes effect, personal injury or death results to an employe who is himself in the exercise of reasonable care at the time:

a. By reason of any defect in the condition of the place, ways, works, machinery or plant connected with or used in the business of the employer, which arose from, or had not been discovered or remedied, owing to the negligence of the employer, and entrusted by him with the duty of seeing that the place, ways, works, machinery or plant were in proper condition: or

b. By reason of the negligence of any person in the service of the employer entrusted with, and at the time of the injury exercising superintendence, whose sole or principal duty is that of superintendence, or in the ab-

sence of such superintendent of any person acting as superintendent, with the authority or consent of such employer; or

c. By reason of the negligence of any person in the service of the employer who has the charge or control of any signal, switch, locomotive engine or train upon a railroad; said employee, or in case the injury results in death, the executor or administrator of such deceased employee who has left surviving a husband, wife or next of kin, shall have the same right of compensation and remedies against the employer as if the employee had not been an employee, nor in the service of the employer, nor engaged in his work. The provisions of law relating to actions for causing death by negligence, so far as the same are consistent with this act, shall apply to an action brought by an executor or administrator of such deceased employee suing under the provisions of this act.

2. No action against an employer for recovery of compensation for injury or death of an employee under this act shall be maintained unless notice of the time, place and cause of the injury is given to the employer within one hundred and twenty (120) days, and the action is commenced within one year after the occurrence of the accident causing the injury or death. The notice required by this section shall be in writing and signed by the person injured, or by some one in his behalf, but if from physical or mental incapacity it is impossible for the person injured to give notice within the time provided in said section, he may give the same within ten (10) days after such incapacity is removed. In case of his death without having given such notice his executor or administrator may give such notice within sixty (60) days after his appointment, but no notice under the provisions of this section shall be deemed invalid or insufficient solely by reason of any inaccuracy in stating the time, place or cause of the injury if it be shown that there was no intention to mislead, and that the party entitled to notice was not, in fact, misled thereby. The notice required by this section shall be served on the employer, or if there is more than one employer, upon one of such employers, and may be served by delivering the same to, or at the residence or place of business of the person on whom it is to be served. The notice may be served by post by registered letter, addressed to the person on whom it is to be served, at his last known place of residence or place of business, and if served by post shall be deemed to have been served at the time when the letter containing the same would be delivered in the ordinary course of the post. When the employer is a corporation notice shall be served the same or by sending it by post by registered letter, addressed to the office or principal place of business of such corporation.

3. An employee by entering upon, or continuing in the service of an employer, shall be presumed to have assumed all risks necessarily incident to his occupation or employment. The necessary risks of the occupation shall, in all cases arising after this act takes effect, be considered as including those risks, and those only, which are inherent in the nature of the business, and which remain after the employer has exercised due care in providing for the safety of his employees and has complied with the laws affecting or regulating such business or occupation for the greater safety of such employees. In an action maintained for the recovery of damages for personal injuries

to an employe, received after this act takes effect, owing to any cause for which the employer would otherwise be liable, the fact that the employe continued in the service of the employer in the same place and course of employment after the discovery by such employe, or after he had been informed of the danger of personal injury therefrom, shall not, as a matter of law, be considered as an assent by such employe to the existence or continuance of such risks of personal injury therefrom, or as negligence contributing to such injury. The question whether the employe understood and assumed the risk of such injury, or was guilty of contributory negligence, by his continuing in the same place and course of employment with knowledge of the risk of injury, shall be one of fact, subject to the usual powers of the court in a proper case to set aside a verdict rendered contrary to the evidence. An employe, or his legal representative, shall not be entitled under this act to any right of compensation or remedy against the employer in any case where such employe knew of the defect or negligence which caused the injury, and failed within a reasonable time to give, or cause to be given, information thereof to the employer, or to some person superior to himself in the service of the employer who had intrusted to him some general superintendence, unless it shall appear on the trial that such defect or negligence was known to such employer or superior person, or could have been discovered by reasonable and proper care or inspection by such employer or superior person prior to such injury to the employe.

4. An employer who shall have contributed to an insurance fund created and maintained for the mutual purpose of indemnifying an employe for personal injuries, for which compensation may be recovered under this act, or to any relief society or benefit fund, may prove in mitigation of damages recoverable by an employe under this act such proportion of the pecuniary benefit, which has been received by such employe from such fund or society on account of such contribution of employer, as the contribution of such employer to such fund or society bears to the whole contribution thereto.

5. Every existing right of action for negligence or to recover damages for injuries resulting in death is continued, and nothing in this act contained shall be construed as limiting any such right of action, nor shall the failure to give the notice provided for in section two (2) of this act be a bar to the maintenance of a suit upon such existing right of action.

NEW MEXICO.

COMPILED LAWS OF 1897.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 3216. Every corporation operating a railway in this Territory shall be liable in a sum sufficient to compensate such employe for all damages sustained by any employe of such corporation, the person injured or damaged without fault on his or her part, occurring or sustained in consequence of any mismanagement, carelessness, neglect, default or wrongful act of any agent

or employe of such corporation while in the exercise of their several duties, when such mismanagement, carelessness, neglect, default or wrongful act of such employe or agent could have been avoided by such corporation through the exercise of reasonable care or diligence in the selection of competent employes or agents, or by not overworking said employes or requiring or allowing them to work an unusual or unreasonable number of hours; and any contract restricting such liability shall be deemed to be contrary to the public policy of this Territory and therefore void.

Sec. 3217. It shall be unlawful for any such corporation knowingly and willfully to use or operate any car or locomotive that is defective, or any car or locomotive upon which the machinery or attachments thereto belonging are in any manner defective, or shops or machinery and attachments thereof which are in any manner defective, which defects might have been previously ascertained by ordinary care and diligence by said corporation.

If the employe of any such corporation shall receive any injury by reason of such defect in any car or locomotive or machinery or attachments thereto belonging, or shops or machinery and attachments thereof, owned and operated, or being run and operated by such corporation, through no fault of his own, such corporation shall be liable for such injury, and upon proof of the same in an action brought by such employe or his legal representatives in any court of proper jurisdiction, against such railroad corporation for damages on account of such injury so received, shall be entitled to recover against such corporation any sum commensurate with the injuries sustained; provided, that it shall be the duty of all the employes of railroad corporations to promptly report all defects coming to their knowledge in any such car or locomotive or shops or machinery and attachments thereof to the proper officer or agent of such corporation and after such report the doctrine of contributory negligence shall not apply to such employe.

Sec. 3218. Whenever the death of an employe shall be caused under circumstances from which a cause of action would have accrued under the provisions of the two preceding sections, if death had not ensued, an action therefor shall be brought in the manner provided by section three thousand two hundred and fifteen, and any sum recovered therein shall be subject to all of the provisions of said section three thousand two hundred and fifteen.

NEW YORK.

ACTS OF 1892.

CHAPTER 600.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES

Section 1. Where, after this act takes effect, personal injury is caused to an employe who is himself in the exercise of due care and diligence at the time:

a. By reason of any defect in the condition of the ways, works or machinery connected with or used in the business of the employer which arose from or had not been discovered or remedied owing to the negligence of the

employer or of any person in the service of the employer and intrusted by him with the duty of seeing that the ways, works or machinery were in proper condition.

b. By reason of the negligence of any person in the service of the employer intrusted with and exercising superintendence whose sole or principal duty is that of superintendence, or in the absence of such superintendent, of any person acting as superintendent with the authority or consent of such employer; the employe, or in case the injury results in death, the executor or administrator of a deceased employe who has left him surviving a husband, wife or next of kin, shall have the same right of compensation and remedies against the employer as if the employe had not been an employe of nor in the service of the employer nor engaged in his work. The provisions of law relating to actions for causing death by negligence, so far as the same are consistent with this act, shall apply to an action brought by an executor or administrator of a deceased employe suing under the provisions of this act.

Sec. 2. No action for recovery of compensation for injury or death under this act shall be maintained unless notice of the time, place and cause of the injury is given to the employer within one hundred and twenty days and the action is commenced within one year after the occurrence of the accident causing the injury or death. The notice required by this section shall be in writing and signed by the person injured or by some one in his behalf, but if from physical or mental incapacity it is impossible for the person injured to give notice within the time provided in said section, he may give the same within ten days after such incapacity is removed. In case of his death without having given such notice, his executor or administrator may give such notice within sixty days after his appointment, but no notice under the provisions of this section shall be deemed to be invalid or insufficient solely by reason of any inaccuracy in stating the time, place or cause of the injury if it be shown that there was no intention to mislead and that the party entitled to notice was not in fact misled thereby. The notice required by this section shall be served on the employer, or if there is more than one employer, upon one of such employers, and may be served by delivering the same to or at the residence or place of business of the person on whom it is served. The notice may be served by post by letter addressed to the person on whom it is to be served, at his last known place of residence or place of business and if served by post shall be deemed to have been served at the time when the letter containing the same would be delivered in the ordinary course of the post. When the employer is a corporation, notice shall be served by delivering the same or by sending it by post addressed to the office or principal place of business of such corporation.

Sec. 3. An employe by entering upon or continuing in the service of the employer shall be presumed to have assented to the necessary risks of the occupation or employment and no others. The necessary risks of the occupation or employment shall, in all cases arising after this act takes effect, be considered as including those risks, and those only, inherent in the nature of the business which remain after the employer has exercised due care in providing for the safety of his employes, and has complied with the

laws affecting or regulating such business or occupation for the greater safety of such employes. In an action maintained for the recovery of damages for personal injuries to an employe received after this act takes effect, owing to any cause for which the employer would otherwise be liable, the fact that the employe continued in the service of the employer in the same place and course of employment after the discovery by such employe, or after he had been informed of the danger of personal injury therefrom, shall not, as a matter of law, be considered as an assent by such employe to the existence or continuance of such risks of personal injury therefrom, or as negligence contributing to such injury. The question whether the employe understood and assumed the risk of such injury, or was guilty of contributory negligence, by his continuance in the same place and course of employment with knowledge of the risk of injury shall be one of fact, subject to the usual powers of the court in a proper case to set aside a verdict rendered contrary to the evidence. An employe, or his legal representative, shall not be entitled under this act to any right of compensation or remedy against the employer in any case where such employe knew of the defect or negligence which caused the injury and failed, within a reasonable time, to give, or cause to be given, information thereof to the employer, or to some person superior to himself in the service of the employer who had intrusted to him some general superintendence, unless it shall appear on the trial that such defect or negligence was known to such employer, or superior person, prior to such injuries to the employe.

Sec. 4. An employer who shall have contributed to an insurance fund created and maintained for the mutual purpose of indemnifying an employe for personal injuries, for which compensation may be recovered under this act, or to any relief society or benefit fund created under the laws of this State, may prove in mitigation of damages recoverable by an employe under this act such proportion of the pecuniary benefit which has been received by such employe from such fund or society on account of such contribution of employer, as the contribution of such employer to such fund or society bears to the whole contribution thereto.

Sec. 5. Every existing right of action for negligence or to recover damages for injuries resulting in death is continued and nothing in this act shall be construed as limiting any such right of action, nor shall the failure to give the notice provided for in section two of this act be a bar to the maintenance of a suit upon any such existing right of action.

Acts of 1906.

CHAPTER 657.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1. Chapter five hundred and sixty of the laws of eighteen hundred and ninety (relating to the organization, etc., of railroads) is hereby amended by adding thereto a new section to be known as section forty-two-a, as follows:

Sec. 42a. In all actions against a railroad corporation, foreign or domestic, doing business in this State or against a receiver thereof, for personal injury

to, or death resulting from personal injury of any person, while in the employment of such corporation or receiver, arising from the negligence of such corporation or receiver or any of its or his officers or employes, every employe, or his legal representatives, shall have the same rights and remedies for an injury, or for death, suffered by him from the act or omission of such corporation or receiver or of its or his officers or employes, as are now allowed by law, and, in addition to the liability now existing by law, it shall be held in such actions that persons engaged in the service of any railroad corporation, foreign or domestic, doing business in this State, or in the service of a receiver thereof, who are intrusted by such corporation or receiver, with the authority of superintendence, control or command of other persons in the employment of such corporation or receiver, or with the authority to control or direct any other employe in the performance of the duty of such employe, or who have, as a part of their duty, for the time being, physical control or direction of the movement of a signal, switch, locomotive engine, car, train or telegraph office, are vice-principals of such corporation or receiver, and are not fellow servants of such injured or deceased employe. If an employe, engaged in the service of any such railroad corporation, or of a receiver thereof, shall receive any injury by reason of any defect in the condition of the ways, works, machinery, plant, tools or implements, or of any car, train, locomotive or attachment thereto belonging, owned or operated, or being and operated by such corporation or receiver, when such defect could have been discovered by such corporation or receiver, by reasonable and proper care, tests or inspection, such corporation or receiver shall be deemed to have had knowledge of such defect before and at the time such injury is sustained; and when the fact of such defect shall be proved upon the trial of any action in the courts of this State, brought by such employe or his legal representatives, against any such railroad corporation or receiver, on account of such injuries so received, the same shall be prima facie evidence of negligence on the part of such corporation or receiver. This section shall not affect actions or causes of action now existing; and no contract, receipt, rule or regulation between an employe and a railroad corporation or receiver shall exempt or limit the liability of such corporation or receiver from the provisions of this section.

NORTH CAROLINA.

REVISAL OF 1905.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYES.

Section 2646. Any servant or employee of any railroad company operating in this State who shall suffer injury to his person, or the personal representative of any such servant or employee who shall have suffered death in the course of his services or employment with such company by the negligence, carelessness or incompetence of any other servant, employe or agent of the company, or by any defect in the machinery, ways or appliances of the

company, shall be entitled to maintain an action against such company. Any contract or agreement, expressed or implied, made by any employe of such company to waive the benefit of this section shall be null and void.

(The statute relating to the operation of mines provides that injuries or death resulting from willful violation of the law or failure to comply therewith gives the injured party, or the personal representatives of deceased persons a right of action for damages. Section 4942.)

NORTH DAKOTA.

REVISED CODES OF 1905.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 4400. Every railroad company organized or doing business in this State shall be liable for all damages done to any employe of such company, in consequence of any negligence of its agents, or by any mismanagement of its engineers, or other employes, to any person sustaining such damages; and no contract which restricts such liability shall be legal or binding.

Sec. 5392. Every one is responsible not only for the result of his willful acts, but also for an injury occasioned to another by his want of ordinary care or skill in the management of his property or person, except so far as the latter has willfully or by want of ordinary care, brought the injury upon himself.

Sec. 5544. An employer is not bound to indemnify his employe for losses suffered by the latter in consequence of the ordinary risks of the business in which he is employed, nor in consequence of the negligence of another person employed by the same employer in the same general business, unless he has neglected to use ordinary care in selection of the culpable employe.

Sec. 5545. An employer must in all cases indemnify his employe for losses caused by the former's want of ordinary care.

Sec. 6556. Every person who suffers detriment from the unlawful act or omission of another may recover from the person in fault a compensation therefor in money, which is called damages.

ACTS OF 1907.

CHAPTER 203.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1. Every common carrier shall be liable to any of its employes, or in case of the death of an employe, to his personal representative, for the benefit of his widow, children or next of kin, for all damages which may result from the negligence of any of its officers, agents or employes, or by reason of any defect or insufficiency due to its negligence in its cars, engines, appliances, machinery, track, roadbed, ways or works.

Section 2. In all actions hereinafter brought against any common carrier to recover damages for personal injuries to an employe, or where such injuries have resulted in death, the fact that the employe may have been

guilty of contributory negligence was slight and that of the employer was gross in comparison, but the damages shall be diminished by the jury in proportion to the amount of negligence and contributory negligence shall be for the jury.

Sec. 3. No contract of employment, insurance, relief benefit or indemnity for injury or death entered into by or on behalf of any employe, nor the acceptance of any such insurance, relief benefit or indemnity by the person entitled thereto shall constitute a bar or defense to any action brought to recover damages for personal injuries to or death of such employe; provided, however, that upon the trial of said action against any common carrier, the defendant may set off therein any sum it has contributed toward any such insurance, relief benefit or indemnity that may have been made to the injured employe, or in case of his death to his personal representative.

Sec. 4. No action shall be maintained under this act unless commenced within one year from the time the cause of action accrued.

OHIO.

BATES'S ANNOTATED STATUTES—THIRD EDITION.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES, ETC.

Sec. 3365-20. It shall be unlawful for any railroad or railway corporation or company owning and operating, or operating, a railroad in whole or in part in this State, to adopt or promulgate any rule or regulation for the government of its servants or employes, or make or enter into any contract or agreement with any person engaged in or about to engage in its service, in which, or by the terms of which, such employe in any manner, directly or indirectly, promises or agrees to hold such corporation or company harmless, on account of any injury he may receive by reason of an accident to, breakage, defect or insufficiency in the cars or machinery and attachments thereto belonging, upon any cars so owned and operated, or being run and operated by such corporation, or company being defective, and any such rule, regulation, contract or agreement shall be of no effect. It shall be unlawful for any corporation to compel or require directly or indirectly an employe to join any company association whatsoever, or to withhold any part of an employe's wages or his salary for the payment of dues or assessments in any society or organization whatsoever, or demand or require either as a condition precedent to securing employment or being employed, and said railroad or railway company shall not discharge any employe because he refuses or neglects to become a member of any society or organization. And if any employe is discharged he may, at any time within ten days after receiving a notice of his discharge, demand the reason of said discharge, and said railway or railroad company thereupon shall furnish said reason to said discharged employe in writing. And no railroad company, insurance society or association, or other person shall demand, accept, require, or enter into any contract, agreement, stipulation with any person about to enter, or

in the employ of any railroad company whereby such person stipulates or agrees to surrender or waive any right to damages against any railroad company, thereafter arising for personal injury or death, or whereby he agrees to surrender or waive in case he asserts the same, any other right whatsoever, and all such stipulations and agreements shall be void, and every corporation, association or person violating or aiding or abetting in the violation of this section shall for each offense forfeit and pay to the person wronged or deprived of his rights hereunder the sum of not less than fifty dollars (\$50) nor more than five hundred dollars (\$500), to be recovered in a civil action.

Sec. 3365-21. It shall be unlawful for any such corporation to knowingly or negligently use or operate any car or locomotive that is defective, or any car or locomotive upon which the machinery or attachments thereto belonging are in any manner defective. If the employe of any such corporation shall receive any injury by reason of any defect in any car or locomotive, or the machinery or attachments thereto belonging, owned and operated, or being run and operated by such corporation, such corporation shall be deemed to have had knowledge of such defect before and at the time such injury is so sustained, and when the facts of such defect shall be made to appear in the trial of any action in the courts of this State, brought by such employe, or his legal representatives, against any railroad corporation for damages, on account of such injuries so received, the same shall be *prima facie* evidence on the part of such corporation.

Sec. 3365-22. In all actions against the railroad company for personal injury to, or death resulting from personal injury, of any person, while in the employ of such person, arising from the negligence of such company or any of its officers or employes, it shall be held in addition to the liability now existing by law, that every person in the employ of such company, actually having power or authority to direct or control any other employe of such company, is not the fellow servant, but superior of such other employe, also that every person in the employ of such company having charge or control of employes in any branch or department who have no power to direct or control in the branch or department in which they are employed.

ACTS OF 1902.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

(PAGE 114.)

Section 1. An employer shall be responsible in damages for personal injury caused to an employe, who is himself in the exercise of due care and diligence at the time, by reason of any defect in the condition of the machinery or appliances connected with or used in the business of the employer, which arose from, or had not been discovered or remedied owing to the negligence of the employer, or of any person in the service of the employer, intrusted by him with the duty of inspection, repair or of seeing that the machinery or appliances were in proper condition.

ACTS OF 1904.

EMPLOYERS' LIABILITY—ASSUMPTION OF RISK.

(PAGE 547.)

Section 1. In any action brought by an employe, or of his legal representative, against his employer, to recover for personal injuries, when it shall appear that the injury was caused in whole or in part by the negligent omission of such employer to guard or protect his machinery or appliances, or the premises or place where said employe was employed, in the manner required by any penal statute of the State or United States in force at the date of the passage of this act, the fact that such employe continued in said employment with knowledge of such omission shall not operate as a defense; and in such action, if the jury find for the plaintiff, it may award such damages not exceeding, for injuries resulting in death, the sum of five thousand dollars, as it may find proportioned to the pecuniary damages resulting from said injuries; but nothing herein shall affect the provisions of section 6135 of the Revised Statutes.

Nothing herein contained shall be construed as affecting the defense of contributory negligence, nor the admissibility of evidence competent to support such defense.

(The statute regulating the working of mines gives a right of action for injuries or death occasioned by any violation of the act or any willful failure to comply with its provisions. An. Stat., Section 301.

A railroad company whose superintendent or station agent has received notice of a defective coupler or brake is liable for injuries occasioned by such defect after the expiration of twenty-four hours after the notice has been received. An. Stat., Section 3365f.

A statute directing the use of self-cleaning ash dump pans on railroad locomotives denies to companies neglecting to comply with the law the defense of contributory negligence or of assumed risks in actions for personal injury to or death of any engineer or fireman occasioned by such negligence. Acts of 1906, page 46.

A statute directing the installation of power or train brakes and of automatic couplers on railway trains provides that in actions for injuries or death caused by failure to observe the law the defenses of assumed risks and contributory negligence will not be allowed. Acts of 1906, act, page 75.)

ACT OF 1908.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO THEIR EMPLOYEES.

Section 1. Every railroad company operating any railroad which is in whole or in part within this State shall be liable for all damages sustained by any of its employes by reason of personal injury or death of such employe:

(a) When such injury or death is caused by a defect in any locomotive, engine, car, hand-car, rail, track, machinery or appliance required by such

company to be used by its employes in and about the business of their employment, if such defect could have been discovered by reasonable and proper care, tests or inspection; and proof of such defect shall be presumptive evidence of knowledge thereof on the part of such company; and any such employe of such railroad company who may be injured or killed as a result of any such defect, shall not be deemed to have assumed the risk occasioned by such defect; nor shall continuance in employment after such knowledge by any employe be deemed an act of contributory negligence.

(b) While any such employe is engaged in operating, running, riding upon or switching passenger, freight or other trains, engines or cars, and while engaged in the performance of his duties as such employe, officer or agent of such company, in the discharge of or failure to discharge his duties as such.

Sec. 2. That in all actions hereafter brought against any railroad company operating any railroad in whole or in part within this State, for personal injury to an employe or where such injuries have resulted in his death, the fact that the employe may have been guilty of contributory negligence, shall not bar a recovery where his contributory negligence was slight and that of the employer was greater in comparison. But the damages shall be diminished by the jury in proportion to the amount of negligence and contributory negligence shall be for the jury.

OKLAHOMA.

CONSTITUTION OF 1907.

ARTICLE IX.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 36. The common law doctrine of the fellow servant, so far as it affects the liability of the master for injuries to his servant, resulting from the acts or omissions of any other servant or servants of the common master, is abrogated as to every employe of every railroad company and every street railway company or interurban railway company, and of every person, firm, or corporation engaged in mining in this State; and every employe shall have the same right to recover for every injury suffered by him for the acts or omissions of any other employe or employes of the common master that a servant would have if such acts or omissions were those of the master himself in the performance of a non-assignable duty; and when death, whether instantaneous or not, results to such employe for which he could have recovered under the above provisions, had not death occurred, then his legal or personal representative, surviving consort or relatives, or any trustee, curator, committee or guardian of such consort or relatives, shall have the same rights and remedies with respect thereto, as if death had been caused by the negligence of the master. And every railroad company and every street railway company or interurban railway company, and every person, firm, or corporation engaged in underground mining in this State shall be liable under this section, for the acts of his or its receiver.

Nothing contained in this section shall restrict the power of the legislature to extend to the employes of any person, firm, or corporation, the rights and remedies herein provided for.

ARTICLE XXIII.—CONTRIBUTORY NEGLIGENCE AND ASSUMPTION OF RISK.

Section 6. The defense of contributory negligence or of assumption of risk shall, in all cases whatsoever, be a question of fact, and shall, at all times, be left to the jury.

OREGON.

ACTS OF 1903.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

(Page 20.)

Section 1. Every corporation operating a railroad in this State, whether such corporation be created under the laws of this State, or otherwise, shall be liable in damages for any and all injury sustained by any employe of such corporation, as follows: When such injury results from the wrongful act, neglect, or default of an agent or officer of such corporation, superior to the employe injured, or of a person employed by such corporation having the right to control or direct the services of such employe injured, or the services of the employe by whom he is injured; and also when such injury results from the wrongful act, neglect, or default of a co-employe engaged in another department of labor from that of the employe injured, or of a co-employe on another train of cars, or of a co-employe who has charge of any switch, signal point, or locomotive engine, or who is charged with dispatching trains or transmitting telegraphic or telephonic orders. Knowledge by an employe injured of the defective or unsafe character or condition of any machinery, ways, appliances, or structures of such corporation shall not of itself be a bar to recovery for any injury or death caused thereby. When death, whether instantaneous, or otherwise, results from an injury to any employe of such corporation received as aforesaid, the personal representative of such employe shall have a right of action therefor against such corporation, and may recover damages in respect thereof. Any contract or agreement, express or implied, made by any such employe to waive the benefit of this section, or any part thereof, shall be null and void, and this section shall not be construed to deprive any such employe, or his personal representative, of any right or remedy to which he is now entitled under the laws of this State.

Sec. 2. The rules and principles of law as to contributory negligence which apply to other cases shall apply to cases arising under this act, except in so far as the same are herein modified or changed.

(Employes whose failure to comply with the factory inspection law causes injury to employes are liable to such employes in damages. Acts of 1907, Chapter 158, Section 8.)

PORTO RICO.

REVISED STATUTES—1902.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 322. Where, after the passage of this act, personal injury is caused to an employe who is himself in the exercise of due care and diligence at the time.

I. By reason of any defect in the condition of the ways, works, or machinery, connected with, or used in the business of the employer, which arose from or had not been discovered or remedied owing to the negligence of the employer or of any person in the service of the employer and intrusted by him with the duty of seeing that the ways, works, or machinery were in proper condition; or

II. By reason of the negligence of any person in the service of the employer intrusted with the exercising of superintendence whose sole or principal duty is that of superintendence; or

III. By reason of the negligence of any person in the service of the employer who has charge of, or physically controls, any signal switch, locomotive engine, car or train in motion, whether attached to an engine or not, upon a railroad, the employe, or in case the injury results in death, his widow or children, or both of them, and if there be no such widow or children, then his parents (provided that said parents were dependent upon such employe for support) may maintain an action for damages against the employer, pursuant to the provisions of this act.

Sec. 323. When an employe receives a personal injury under any of the conditions enumerated in Section 1 hereof (Sec. 322), he may bring an action against his employer before the proper district court, to recover damages for such injury. The damages so recovered shall not exceed the sum of two thousand dollars, and in assessing the amount of such damages the court shall take into consideration the degree of culpability of the employer, or of the person for whose negligence the employer is liable hereunder, the sums expended by the employe for medical attendance, and the loss of wages while recovering from the injury; the court shall also take into consideration the physical pain and suffering caused by the injury. If the injury be of such character as to permanently impair the earning capacity of the employe, the court shall include in the damages awarded an allowance for such loss. In case the injury results in a temporary impairment of his earning capacity, the court, in addition to pain and suffering and the expenditures for medical services and drugs, shall take into consideration the average rate of wages which, under ordinary conditions, he might have earned if not injured.

Section 324. In case of the death of the employe before the termination of the action so brought against the employer, it may be continued in the name of his widow and children, and if there be no such widow or children, then in the name of his parents, if they, or either of them, were dependent

upon such employe for support at the time of the injury. If it shall appear in any action so continued in the name of the widow, children or parents of a deceased injured employe that the death was the result of the injury, damages shall be assessed by the court in a sum not to exceed three thousand dollars; and the court shall estimate such damages in accordance with:

(a) The degree of culpability of the employer or of the person for whose negligence the employer is liable.

(b) The material damage incurred by the claimant or claimants through the death of the employe in accordance with the actual needs that said claimant or claimants had to depend upon the wages of such employes for their support, taking into consideration his earning capacity and his probabilities of life, at the time of the accident.

Section 325. When, before having commenced an action hereunder, an employe dies as the result of personal injury received under any of the conditions enumerated in section 1 hereof (sec. 322), his widow, children, or both of them, or if there be no such widow or children, then his parents, providing such parents were dependent upon such employe for support at the time of the injury, may maintain an action against the employer before the proper district court for damages caused by the death of such employe. Such damages shall not exceed the sum of three thousand dollars, and shall be fixed by the court in accordance with:

(a) The degree of culpability of the employer or of the person for whose negligence the employer is liable.

(b) The material damage incurred by the claimant or claimants through the death of the employe in accordance with the actual needs that such claimant or claimants had to depend upon the wages of such employe for their support, taking into consideration his earning capacity and his probabilities of life at the time of the accident.

Sec. 326. The court, when fixing the amount of damages to be paid in case of personal injury under this act, shall determine the amount due to each of the claimants in proportion to the material damages incurred by each of them in accordance with the actual needs which each of them had to depend upon the wages of the employe whose death was caused by the accident.

Sec. 327. No action for the recovery of damages for injury or death under the provisions of this act shall be maintained unless notice of the time, place and cause of the injury is given to the employer within thirty days after the injury is received or unless it is commenced within six months from the date of the injury. The notice required by this section shall be in writing, signed by the person injured or by some one in his behalf; but if from mental or physical incapacity it is impossible for the person injured to give the notice within the time provided in said section, he may give the same within ten days after the incapacity is removed, and in case of his death without having been at any time after his injury of sufficient capacity to give the person or persons entitled to claim compensation pursuant to the provisions of this act, or their representatives, may give such notice within thirty days after the death of such employe. But no notice given under the provisions of this section shall be deemed to be invalid or insufficient solely by

reason of any inaccuracy in stating the time, place or cause of injury; provided, it is shown that there was no intention to mislead, and that the party entitled to notice was not in fact misled thereby.

Sec. 328. Whenever an employe (employer) enters into a contract, either written or verbal, with an independent contractor to do part of such employer's work, or whenever such contractor enters into a contract with a subcontractor to do all or any part of the work comprised in such contractor's contract with the employer, such contract or subcontract shall not bar the liability of the employer for injuries to the employes of such contractor or subcontractor by reason of any defect in the condition of the ways, works, machinery or plant, if they are the property of the employer, or furnished by him, and if such defect arose or had not been discovered or remedied through the negligence of the employer or of some person intrusted by him with the duty of seeing that they were in proper condition.

Sec. 329. No employe, or his widow or children, or either of them, or his parents, if there be no such widow or children, shall be entitled under this act to any right or compensation or remedy against the employer in any case where such employe knew of the defect or negligence which caused the injury, and failed within a reasonable time to give, or cause to be given, information thereof to the employer, or to some person superior to himself in the service of the employer who had intrusted to him some general superintendence.

Sec. 330. Any employer who shall have contributed to an insurance fund created and maintained for the mutual purpose of indemnifying an employe for personal injuries for which compensation may be recovered under this act, or who has insured the said employe in any insurance against the accident of labor, shall be entitled to have deducted from the sum which he shall have to pay as compensation under the provisions of this act, the amount that shall have been received by the person injured, or by his widow, or children, or both of them, or by the parents, if there be no such widow and children, from the aforesaid fund or from the insurance company by reason of the same accident.

Sec. 331. This act shall not apply to injuries caused to domestic servants, or farm laborers, by fellow employes.

PENNSYLVANIA.

ACTS OF 1907.

ACT No. 329.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYES.

Section 1. In all actions brought to recover from an employer for injuries suffered by his employe the negligence of a fellow servant of the employe shall not be a defense, where the injury was caused or contributed to by any of the following causes, namely:

Any defect in the works, plant or machinery of which the employer could have had knowledge by the exercise of ordinary care; the neglect of any

person engaged as superintendent, manager, foreman or any other person in charge or control of the works, plant or machinery; the negligence of any person in charge of or directing the particular work in which the employe was engaged at the time of the injury or death; the negligence of any person to whose orders the employe was bound to conform, and did conform, and, by reason of his having conformed thereto, the injury or death resulted; the act of any fellow servant, done in obedience to the rules, instructions or orders given by the employer, or any other person who has authority to direct the doing of said act.

The manager, superintendent, foreman or other person in charge or control of the works, or of any part of the works, shall, under this act, be held as the agent of the employer, in all suits for damages for death or injury suffered by employes.

SOUTH CAROLINA.

CONSTITUTION.

ARTICLE 9.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYES.

Section 15. Every employe of any railroad corporation shall have the same rights and remedies for any injury suffered by him from the acts or omissions of said corporations or its employes as are allowed by law to other persons not employes, when the injury results from the negligence of a superior agent or officer, or of a person having a right to control or direct the services of a party injured, and also when the injury results from the negligence of a fellow servant engaged in another department of labor from that of the party injured, or of a fellow servant on another train of cars, or one engaged about a different piece of work. Knowledge by an employe injured of the defective or unsafe character or condition of any machinery, ways or appliances, shall be no defense to an action for an injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them. When death ensues from any injury to employes the legal or personal representatives of the person injured shall have the same rights and remedies as are allowed by law to such representatives of other persons. Any contract or agreement, express or implied, made by any employe to waive the benefit of this section shall be null and void; and this section shall not be construed to deprive any employe of a corporation, or his legal or personal representative, of any remedy or right that he now has by the law of the land. The general assembly may extend the remedies herein provided for to any other class of employes.

CODE OF 1902.

CIVIL CODE.

RIGHTS AND REMEDIES OF EMPLOYES ON STREET RAILWAYS.

Section 2848. Every employe of any street railway doing business in this State shall have the same rights and remedies for an injury suffered by any

person from the acts of omission of said corporation, or its employes, as are provided by the constitution for employes of railroad corporations.

ACTS OF 1903.

ACT NO. 48.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES—RELIEF DEPARTMENT.

Section 1. From any after the approval of this act, when any railroad company has what is usually called a relief department for its employes, the members of which are required to pay some dues, fees, moneys or compensation to be entitled to the benefits thereof, upon the death or injury of the employe, a member of such relief department, such railroad company is hereby required to pay to the person entitled to same the amount it was agreed the employe or his heirs at law should receive from such relief department; the acceptance of which amount shall not operate to estop or in any way bar the right of such employe, or his personal representative, from recovering damages of such railroad company for injury or death caused by the negligence of such company, its agents or servants, as now provided by law; and any contract or agreement to the contrary shall be ineffective for that purpose.

SOUTH DAKOTA.

REVISED CODES OF 1903.

CIVIL CODE.

LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES.

Section 1449. An employer is not bound to indemnify his employe for losses suffered by the latter in consequence of the ordinary risks of the business in which he is employed, nor in consequence of the negligence of another person employed by the same employer in the same general business, unless he has neglected to use ordinary care in the selection of the culpable employe.

Sec. 1450. An employer must in all cases indemnify his employe for losses caused by the former's want of ordinary care.

ACTS OF 1907.

CHAPTER 219.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1. Every common carrier engaged in trade or commerce in the State of South Dakota shall be liable to any of its employes, or in case of death, to his personal representative for the benefit of his widow and children, if any, if none, then for his parents, if none, then for his next of kin dependent upon him, for all damages which may result from the negligence of any of its officers, agents or employes, or by reason of any defect or in-

sufficiency due to its negligence in its cars, engines, appliances, machinery, track, roadbed, ways or works.

Sec. 2. In all actions hereafter brought against any common carrier to recover damages for personal injuries to an employe, or where such injuries have resulted in his death, the fact that the employe may have been guilty of contributory negligence shall not bar a recovery where his contributory negligence was less than the negligence of the employer, but the damages shall be diminished by the jury in proportion to the amount of negligence attributable to such employe. All questions of negligence and contributory negligence shall be for the jury.

Sec. 3. No contract of employment, insurance, relief benefit or indemnity for injury or death entered into by or on behalf of any employe, nor the acceptance of any such insurance, relief benefit or indemnity by the person entitled thereto shall constitute any bar or defense to any action brought to recover damages for personal injuries to or death of such employe; provided, however, that upon the trial of such action against any common carrier the defendant may set off herein any sum it has contributed towards any insurance, relief benefit or indemnity that may have been paid to the injured employe, or in case of his death, to his personal representative.

Sec. 4. No action shall be maintained under this act unless commenced within two years from the time the cause of action accrued.

TEXAS

. ACTS OF 1897. SPECIAL SESSION.

CHAPTER 6.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Sec. 1. Every person, receiver or corporation operating a railroad or street railway line of which shall be situated in whole or in part in this State, shall be liable for all damages sustained by any servant or employe thereof while engaged in the work of operating cars, locomotives or trains of such person, receiver or corporation, by reason of the negligence of any other servant or employe of such person, receiver or corporation, and the fact that such servants or employes were fellow servants with each other shall not impair or destroy such liability.

Sec. 2. All persons engaged in the service of any person, receiver or corporation, controlling or operating a railroad or street railway the line of which shall be situated in whole or in part in this State, who are intrusted by such person, receiver or corporation with the authority of superintendence, control or command of other servants or employes of such person, receiver or corporation, or with the authority to direct any other employe in the performance of any duty of such employe, are vice principals of such person, receiver or corporation, and are not fellow servants with their co-employees.

Sec. 3. All persons who are engaged in the common service of such person, receiver or corporation controlling or operating a railroad or street railway, and who while so employed are in the same grade of employment

and are doing the same character of work or service and are working together at the same time and place and at the same piece of work and to a common purpose are fellow servants with each other. Employes who do not come within the provisions of this section shall not be considered fellow servants.

Section 4. No contract made between the employer and the employe based on the contingency of death or injury of the employe and limiting the liability of the employer under this act or fixing damages to be recovered shall be valid or binding.

Sec. 5. Nothing in this act shall be held to impair or diminish the defense of contributory negligence when the injury of the servant or employe is caused proximately by his own contributory negligence.

ACTS OF 1905.

CHAPTER 103.—LIABILITY OF EMPLOYERS FOR INJURIES TO EMPLOYEES—ASSUMPTION OF RISK.

Section 1. In any suit against a person, corporation or receiver operating a railroad or street railway for damages for the death or personal injury of an employe or servant, caused by the wrong or negligence of such person, corporation or receiver, the plea of assumed risk of the deceased or injured employe where the ground of the plea is knowledge or means of knowledge of the effect and danger which caused the injury or death shall not be available in the following cases:

First. Where such employe had an opportunity before being injured or killed to inform the employer or a superior intrusted by the employer with the authority to remedy or cause to be remedied the defect, and does not notify or cause to be notified the employer or superior thereof within a reasonable time; provided, it shall not be necessary to give such information where the employer or such superior thereof already knows of the defect.

Second. Where a person of ordinary care would have continued in the service with the knowledge of the defect and danger and in such case it shall not be necessary that the servant or employe give notice of the defect as provided in subdivision 1 hereof.

UTAH.

REVISED STATUTES OF 1898.

FELLOW SERVANTS.

Section 1342. All persons engaged in the service of any person, firm or corporation, foreign or domestic, doing business in this State, who are intrusted by such person, firm or corporation as employer with the authority of superintendence, control or demand of other persons in the employ or service of such employer, or with the authority to direct any other employe

in the performance of any duties of such employe, are vice-principals of such employer and are not fellow servants.

Sec. 1343. All persons who are engaged in the service of such employer, and who, while so engaged, are in the same grade of service and are working together at the same time and place and to a common purpose, neither of such persons being intrusted by such employer with any superintendence or control over his fellow employes, are fellow servants with each other. Provided, that nothing herein contained shall be so construed as to make the employes of such employer fellow servants with other employes engaged in any other department of service of such employer. Employes who do not come within the provisions of this section shall not be considered.

(The statute regulating the working of coal and hydrocarbon mines directs the employment of a certified mining or fire boss and provides that where an accident causing personal injury or death occurs in a mine in which the mining or fire boss has no certificate of competency the owner or operator of the mine shall be liable in the full amount of the damages sustained. Acts of 1905, Chapter 122, section 16.)

VERMONT.

(Statutes directing the installation of safety appliances on railroads makes negligent companies liable for damages and injuries resulting from failure to comply with the law. Statutes of 1894, sections 3887, 3911.)

VIRGINIA.

CONSTITUTION.

ARTICLE 12.—LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 162. The doctrine of fellow servant, so far as it affects the liability of the master for injuries to his servant resulting from the acts or omissions of any other servant or servants of the common master, is, to the extent hereinafter stated, abolished as to every employe of a railroad company, engaged in the physical construction, repair or maintenance of its roadway, track or any of the structures connected therewith, or in any work in or upon a car or engine standing upon a track, or in the physical operation of a train, car, engine or switch, or in any service requiring his presence upon a train, car or engine: and every such employe shall have the same right to recover for every injury suffered by him from the acts or omissions of any other employe or employes of the common master, that a servant would have (at the time when this constitution goes into effect), if such acts or omissions were those of the master himself in the performance of a non-assignable duty: provided, that the injury so suffered by such railroad employe result from the negligence of an officer, or agent, of the

company of a higher grade of service than himself, or from that of a person, employed by the company, having the right, or charged with the duty, to control or direct the general services or the immediate work of the party injured, or the general services or the immediate work of the co-employee through, or by, whose act or omission he is injured; or that it result from the negligence of a co-employee engaged in another department of labor, or engaged upon, or in charge of, any car upon which, or upon the train of which it is a part, the injured employee is not at the time of receiving the injury, or who is in charge of any switch, signal point or locomotive engine, or is charged with dispatching trains or transmitting telegraphic or telephonic orders therefor; and whether such negligence be in the performance of an assignable or non-assignable duty. The physical construction, repair or maintenance of the roadway, track or any of the structures connected therewith, and the physical construction, repair, maintenance, cleaning or operation of trains, cars or engines, shall be regarded as different departments of labor within the meaning of this section. Knowledge by any such railroad employee injured of the defective or unsafe character or condition of any machinery, ways, appliances or structures shall be no defense to an action for injury caused thereby. When death, whether instantaneous or not, results to such an employee from any injury for which he could have recovered, under the above provisions, had death not occurred, then his legal or personal representative, surviving consort and relatives (and any trustee, curator, committee or guardian of such consort or relatives) shall, respectively, have the same rights and remedies with respect thereto as if his death had been caused by the negligence of a co-employee while in the performance, as vice-principal, of a non-assignable duty of the master. Every contract or agreement, express or implied, made by an employee, to waive the benefit of this section, shall be null and void. This section shall not be construed to deprive any employee, or his legal or personal representative, surviving consort or relatives (or any trustee, curator, committee or guardian of such consort or relatives) of any rights or remedies that he or they may have by the law of the land at the time this constitution goes into effect. Nothing contained in this section shall restrict the power of the general assembly to further enlarge, for the above-named class of employees, the rights and remedies hereinbefore provided for, or to extend such rights and remedies to, or otherwise enlarge the present rights and remedies of, any other class of employees of railroads or of employees of any person, firm or corporation.

CODE OF 1904.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1294k. Every corporation operating a railroad in this State, whether such corporation be created under the laws of this State or otherwise, shall be liable in damages for any and all injuries sustained by any employee of such corporation as follows: When such injury results from the wrongful act, neglect or default of an agent or officer of such corporation superior to the employee injured, or the services of the employee by whom

he is injured: and also when such injury results from the wrongful act, neglect or default of a co-employee engaged in another department of labor from that of the employee injured, or of a co-employee on another train of cars, or of a co-employee who has charge of any switch, signal point, or locomotive engine, or who is charged with dispatching trains or transmitting telegraphic or telephonic orders. Knowledge of an employee injured of the defective or unsafe character or condition of any machinery, ways, appliances or structures of such corporation shall not of itself be a bar to recovery for any injury or death caused thereby. When death, whether instantaneous or otherwise, results from any injury to any employee of such corporation received as aforesaid, the personal representative of such employee shall have a right of action therefor against such corporation, and may recover damages in respect thereof. Any contract or agreement, express or implied, made by any such employee to waive the benefit of this section or any part thereof shall be null and void, and this section shall not be construed to deprive any such employee, or his personal representative, of any right or remedy to which he is now entitled under the laws of this State. The rules and principles of law as to contributory negligence, which apply to other cases, shall apply to cases arising under this act, except in so far as the same are herein modified or changed.

WASHINGTON.

(An act requiring frogs, switches and guard rails to be blocked and guarded makes companies failing to do so liable in damages to parties injured because of such failure. Acts of 1899, Chapter 35, Section 2.

Employers whose failure to comply with the factory inspection law causes injury to employees are liable to such employees in damages. Acts of 1905, Chapter 84, Section 8.)

WISCONSIN.

ANNOTATED STATUTES OF 1898.

LIABILITY OF RAILROAD COMPANIES FOR INJURIES TO EMPLOYEES.

Section 1816 (As amended by Chapter 254, Acts of 1907). Every railroad company shall be liable for all damages for all injuries whether resulting in death or not, sustained by any of its employees, subject to the provisions hereinafter contained regarding contributory negligence on the part of the injured employee:

1. When such injury is caused by a defect in any locomotive, engine, car, rail, track, roadbed, machinery or appliance used by its employees in and about the business of their employment.

2. When such injury shall have been sustained by any officers, agent, servant or employee of such company, while engaged in the line of his duty

as such and which such injury shall have been caused in whole or in greater part by the negligence of any other officer, agent, servant or employe of such company, in the discharge of, or by reason of failure to discharge his duties as such.

3. In every action to recover for such injury the court shall submit to the jury the following questions: First, whether the company, or any officer, agent, servant or employe other than the person injured was guilty of negligence directly contributing to the injury; second, if that question is answered in the affirmative, whether the person injured was guilty of any negligence which directly contributed to the injury; third, if that question is answered in the affirmative, whether the negligence of the party so injured was slighter or greater as a contributing cause to the injury than that of the company, or any officer, agent, servant or employe other than the person so injured; and such other questions as may be necessary.

4. In all cases where the jury shall find that the negligence of the company, or any officer, agent or employe of such company was greater than the negligence of the employe so injured, and contributing in a greater degree to such injury, then the plaintiff shall be entitled to recover, and the negligence, if any, of the employe so injured shall be no bar to such recovery.

5. In all cases under this act the question of negligence and contributory negligence shall be for the jury.

6. No contract or receipts between any employee and a railroad company, no rule or regulation promulgated or adopted by such company, and no contract, rule or regulation in regard to any notice to be given by such employe shall exempt such corporation from the full liability imposed by this act.

7. The phrase "railroad company," as used in this act, shall be taken to embrace any company, association, corporation or person managing, maintaining, operating, or in possession of a railroad in whole or in part within this State whether as owner, contractor, lessee, mortgage, trustee, assignee or receiver.

8. In any action brought in the courts in this State by a resident thereof, or the representative of a deceased resident, to recover damages in accordance with this act, where the employe of any railroad company owning or operating a railroad extending a railroad into or through this State and into or through any other State or States shall have received his injuries in any other State where such railroad is owned or operated, and the contract of employment shall have been made in this State, it shall not be competent for such railroad company to plead or prove the decisions or statutes of the State where such person shall have been injured as a defense to the action brought in this State.

9. The provisions of this act shall not apply to employes working in shops or offices.

(A statute directing railroad companies to block or guard all frogs in their tracks makes failure to comply with the law ground for action in damages in cases where injury results from such failure, even though the failure or violation occurs through the negligence of some other agent or employe.

The law requiring dangerous machinery to be guarded takes away the defense of assumed risks in cases where employees are injured as a result of the employer's failure to comply with the law.

A statute providing for the erection of telltales at the approaches to bridges, etc., over railroads, takes away from companies neglecting or refusing to comply with the law the defense of assumption of risk in cases where employees are injured on account of the lack of such telltales.)

WYOMING.

CONSTITUTION.

ARTICLE 10.—LIMITATION AND WAIVER OF RIGHT TO DAMAGES.

Section 4. No law shall be enacted limiting the amount of damages to be recovered for causing the injury or death of any person. Any contract or agreement with any employe waiving any right to recover damages for causing the death or injury of any employe shall be void.

ARTICLE 19.—CONTRACTS OF EMPLOYES WAIVING RIGHT TO DAMAGES.

Section 1. It shall be unlawful for any person, company or corporation, to require of its servants or employes as a condition of their employment, or otherwise, any contract or agreement, whereby such person, company or corporation shall be released or discharged from liability or responsibility, on account of personal injuries received by such servants or employes, while in the service of such person, company or corporation, by reason of the negligence of such person, company or corporation, or the agents or employes thereof, and such contracts shall be absolutely null and void.

(In an article on the operation of mines the constitution contains a provision granting a right of action for injuries or death occasioned because of its violations by the employer of the provisions of the constitution or of laws passed in pursuance thereof.)

Strikes and Lockouts in New Jersey

For the Twelve Months Ending September 30, 1909.

Generally speaking, the relations existing between employer and employe in the widely diversified industrial activities of New Jersey have been and are now of a cordial and satisfactory character. Serious disturbances have been remarkably few, and of these by far the larger number occurred in groups of foreign workmen, who are at times suspicious of their employers, mainly through ignorance of the language and the customs of the particular occupation in which they are employed.

There have of course been strikes by other classes of workmen, as the records which appear in each succeeding year's report of the Bureau shows, but they were for the most part small in the number involved, and the building trades workmen furnished a far larger proportion of these than did the wage earners employed in factory and workshop industries. New Jersey has been signally fortunate in this respect, but its comparatively tranquil experience is not due to indifference regarding the movement for better working conditions and higher wages which have caused so many industrial disturbances elsewhere. Our wage earners as a class are as eager as any other for such advantages as may be attained through a proper exercise of the power of organization; they have their unions and have had them since the commencement of the labor propaganda, but as a rule these bodies have pursued a conservative course, avoiding extreme radicalism and appealing rather to the employer's sense of enlightened self-interest and fairness for the accomplishment of their purpose, than to his fear of a strike, and dread of the consequence of provoking one.

For this reason the influence of the labor movement in New Jersey, so far as factory industries are concerned, has been to a certain extent constructive; out of it have grown many forms of co-operative benefit institutions for the preservation of the workman's health, his protection in case of disability through acci-

dent or ill health, and a general improvement of all the conditions under which his work had been previously performed. Labor is thus, if not made attractive, at least shorn of its most disagreeable features, as far as that may be possible; employer and employe are drawn closer together and their regard for each other increased by joint participation in the good work, the benefits of which are enjoyed alike by both. This wise and humane course, which is now a fixed feature of administration in many large establishments here, is the best possible guarantee that so long as they are maintained, no rupture of the cordial relations now existing between employer and employe need be feared. The good results following this conciliatory policy have enlisted the interest of other manufacturers, and the conviction is gaining ground not only in New Jersey, but throughout the entire country, that a contented body of workmen is the only reliable guarantee of industrial peace.

Strikes there were, however, during the year, but happily they were less numerous than in former years, and with two exceptions, not of much consequence, either with regard to duration or the numbers involved. The record is for the twelve months ending September 30th, 1909, and the strikes with all essential details relating to each follow in chronological order.

OCTOBER 5—A strike involving 450 women and 5 men began in the cigar manufactory of I. Lewis & Co., Newark, on August 3, because of the discharge of one employe; it lasted until October 5, 1908, and was not successful. The wage lost was \$32,000. The shop union was dissolved, and the strike leaders were not reemployed.

OCTOBER 6—Thirty-six hoisting engine drivers, employed by the Millard Construction Co. in the Erie Railroad cut, Jersey City, struck for an increase in wages of 5 cents per hour; a compromise was effected on the basis of 2½ cents additional pay, and the strikers returned to work on the eighth, after an idleness of two days.

OCTOBER 27—About 300 laborers employed in the Erie Railroad cut at Jersey City went on strike because as claimed by them, the food with which they were supplied was of a very inferior quality, while the prices charged for the same were unreasonably high. Other laborers employed by the company were, at various points of the cut, threatened with violence by groups of strikers, several of whom were arrested and found to be armed with revolvers. With the exception of a few occurrences of this character there was no disturbance, the police being on guard at all points where the new laborers were liable to molestation.

NOVEMBER 2—Twenty-two men employed in the sausage factory of Fleckenstein Bros. Co. at Central avenue, Jersey City, went out on strike because their employers had refused to sign an agreement with the union of which they were members. The firm pays the union rate of wages, and works the hours prescribed by union rules, but refused to sign a contract of any kind on the ground that the one which they had subscribed to one year before had been totally ignored by the workmen.

New men were employed and the strikers established pickets about the works, two of whom were arrested for assaulting their successors. One of the strikers was arrested for distributing hand-bills, denouncing the firm, and urging a boycott of its goods. On November 19th the strikers applied for reinstatement on the old terms, stipulating however, that all should be reemployed and the men discharged who had taken their places. This was refused, and the firm agreed to take back the strikers only as vacancies occurred. The strike lasted 21 days, and up to the time of this writing the wage loss was \$900.

DECEMBER 3—Two hundred and twenty-five men and one hundred and ten women, employes of the Boyden Shoe Co., Newark, went out on strike, because of the firm's action in employing additional help to meet the demands of a large hurried order. The factory had been running on short time for several months, but on receipt of the order referred to, all employes were placed on full time, and a number of new men employed in the treeing department. The employes objected to this, taking the ground that extra help should not be employed, but that the old hands should be employed overtime. Frequent conferences were held between the company officials and strikers, but were productive of no tangible results until December 17, when the men returned unconditionally. The strike lasted two weeks, and the wage loss was \$7,000.

DECEMBER 8—About sixty repairers employed in the Lehigh Valley shops at Perth Amboy, quit work without notifying the company officials of their purpose. Dissatisfaction on account of wages was supposed to be the reason for their action, but no demand had been made for an increase. Some months previous to the strike, the men had been changed from piece to day work, and dissatisfaction over the fact that the new arrangement produced no increase in earnings, seems to be the only reasonable explanation of their action.

The company decided not to reemploy the men, but to take the work to other points on the division.

DECEMBER 9—Owing to a disagreement between two unions of glass workers, the South Millville glass plant of the Whital-Tatum Co was idle one day (December 9).

DECEMBER 12—On this date, the carpenters of Morristown declared a strike off that was begun on April 1, 1907, for a wage rate of 45 cents per hour, and a working schedule of 44 hours per week. This demand was, at

the time, met by local builders with an offer of 41 cents per hour and 47 hours per week, which the union refused to consider, until on the above date the employers terms were accepted, and the men returned to work on the terms offered eighteen months before. It is impossible to estimate the wage loss, as the greater number of men involved in the strike found irregular employment outside of the Morristown jurisdiction, without reference to standard wage rates.

DECEMBER 16—Twelve caulkers employed on the Union drydocks at Weehawken, struck because the demand of a walking delegate for the dismissal of two non-union men, who had been employed under a pressure of work had been refused by the firm. After the strike had lasted a day the two men objected to agreed to join the union, and the strikers returned to work.

DECEMBER 16—One hundred employes of the Newark Express and Transportation Co., the Newark and New York Transfer Co., Lawshe Express Co. and Luedekin Express Co.—all doing business in and about Newark, went on strike for increased pay and the recognition of their union—Local No. 475, International Brotherhood of Teamsters and Helpers. A uniform wage rate of \$15 per week, the wage of those who drove wagons in New York City, was demanded for all, regardless of the route on which they are employed. The local drivers wages range between \$10 and \$12 per week. The working hours, which begin at 7 A. M., continue until deliveries over the several routes are all made, and often extend far into the night. The drivers, recognizing the difficulty of making a change in this respect, do not object to the hours.

On December 17 a conference was held between the company officials and the strikers, at which it was agreed that New York drivers shall continue to receive \$15 per week as heretofore; Newark drivers of teams, \$13.50 per week, single drivers, \$12 per week, and drivers of three-horses, \$17 per week. The several companies involved signed an agreement to maintain this scale for one year, and to employ none but union men. The strike lasted one day.

DECEMBER 18—Eleven men and twenty-one women employed by Ackerman Bros., silk manufacturers of Paterson, went on strike for an increase in wages. A conference held the next day (Friday), settled the matter by a compromise, but work was not resumed until Monday. The wage loss was \$80.

DECEMBER 31—Eight men employed in the Groeller Iron Works on Frelinghuysen avenue, Newark, went on strike because of the refusal of the firm to discharge two non-union men. At this writing the strikers were still out; the wage loss was \$200 per week.

JANUARY 1—One hundred and thirty men employed in the B. Nicoll & Co. limestone quarry at Franklin Furnace, who were working on a wage scale ranging from \$1.20 to \$1.40 per day, united in a demand upon their

employers for an increase in wages all round of 20 cents per hour, and went on strike because of the firm's refusal to grant the same.

On January 7 about 60 of the strikers returned to work at the old wage scale, and others followed their example from day to day until January 8th, when all had resumed work under the old wage schedule. The total wage loss is reported at \$900. The strikers were principally Slavs and Hungarians.

JANUARY 4—Twenty drivers employed by the New York Poultry Trucking Co. at 417 Newark street, Hoboken, struck for the union rate of wages, and the next day succeeded in obtaining it. The wage loss involved was \$110.

JANUARY 22—Twenty teamsters employed by the firm of Duckworth & Crawford, who carry on a general trucking and express business in Newark, made a demand for the union scale of wages, and went out on strike because of the refusal of their employers to allow the same. The men were all members of Local Teamsters Union 475, and in quitting work, obeyed the orders of their walking delegate.

The teamsters of practically all other concerns doing a trucking or express business in and about Newark, Harrison, Kearny and Jersey City, being members of the union, joined in making similar demands for higher wages, and quit work for the purpose of enforcing them. Some violence followed attempts on the part of employers to run their trucks and wagons with new men, until February 10, the strike was brought to a close by the granting of the union wage scale by all employers. The teamsters had been receiving from \$9 to \$11 per week, and under the union scale their pay will be from \$12 to \$15 per week.

While the strike was in progress an appeal was made by Teamsters Union, No. 475, to the building trades organization of Hudson and Essex counties to assist the teamsters by ordering their members not to handle material carted by non-union drivers, but the strike ended before action could be taken in the matter. The police force of the municipalities, through which the plank road from Newark to Jersey City runs, were obliged to protect the non-union drivers against the attacks of the strikers and their sympathizers.

FEBRUARY 1—The coach drivers of Jersey City, through their local union, made a demand on the Coach Owners' Association for a minimum wage scale of \$14 per week for regular drivers, \$2.00 per day for extra men, and an allowance of 25 cents per hour for all time worked after 6 o'clock P. M. After a conference between representatives of the drivers and coach owners, an agreement, providing for the maintenance of this schedule for one year, was signed by both sides.

FEBRUARY 3—Twenty-eight loom fixers and twisters employed by the Henry Doherty Silk Co., at Paterson, submitted a demand for an increase in piece prices and immediately quit work without allowing time for a conference on the subject.

The firm filled their places without delay. The action of loom fixers and twistlers was not supported by the weavers.

FEBRUARY 4—Twelve men and twelve women employed by the T. J. Mitchell Co., silk manufacturers of Paterson, went on strike to enforce a demand for an increase of wages, which was refused by the firm. The strike lasted three days, and most of those concerned returned to work on the old terms.

FEBRUARY 12—Twenty-seven sheet metal workers employed by Storms & Co. on the work of the Overbrook Asylum, Newark; the new County Courthouse, Jersey City, and a school building in Bayonne, went out on strike because the ventilating plant at Overbrook had been installed by non-union men. The firm had sublet the contract for installing the blowers to the manufacturers of the devices specified in the contract for the building; this concern had been in bad standing with the unions for some time back over the employment of non-union men. When the work of installing the blowers was completed, the sheet iron workers—Storms & Co., their employers—said that they must be taken down and re-installed by union men. This the president of the company refused to permit, and the strike followed on all the buildings named above.

FEBRUARY 18—Three hundred employes of the Vulcan Detinning Co.'s plant at Sewaren, went on strike because the superintendent had discharged four men for cause. Before leaving, the men, who were mostly foreigners, marched to the office in a body and demanded the re-instatement of their discharged companions; on meeting with a refusal all left the works together. A demand was then made for the discharge of the manager, to which the company paid no attention. On February 21 all returned to work unconditionally. The strike lasted three days, and the wage loss was \$1,100.

FEBRUARY 19—Three hundred men employed in the brick and terra cotta works of Henry Maurer & Son, at Maurer, near Perth Amboy, made a demand for increased pay and went out on strike to enforce the same. The wage rate in operation had been fourteen cents per hour for nine hours work per day. On February 24th the men returned to work under an agreement entered into by the company that on and after April 1st wages would be fifteen cents per hour, and the working time ten hours per day. The strike lasted five days, and resulted in an increase of twenty-four cents per day in earnings. The wage loss was \$2,000.

FEBRUARY 22—Fifteen girls employed in the spinning room of the Hermann, Aukam & Co. handkerchief factory at South River, made a demand for an increase in piece work prices amounting to about 20 per cent., and on being refused went out on strike. The movement spread throughout the entire works, and later in the day the entire force of about 900 girls went out also. The strikers and others who quit work in sympathy with them are foreigners of the Polish and Hungarian races.

The strike was settled on March 6th, on the basis of a small advance in the wages of the hemstitchers. The strike lasted twelve days, and the wage loss was about \$11,000.

FEBRUARY 25—About 150 men employed in the fire brick works of M. D. Valentine & Bro., at Woodbridge, made a demand for an increase in wages. The rates being paid ranged from \$1.35 to \$1.45 per day, and \$1.50 was the amount asked for. The firm refused any advance and the men quit work in a body. The same company operates another plant at Valentine's Station, a short distance from Woodbridge; this place was closed for repairs immediately after the strike began, and its men joined those on strike in making demonstrations at other plants for the purpose of intimidating their employes into stopping work. In this they were fairly successful, as nine firms engaged in the same lines of production are reported as having been involved in the strike, not through the voluntary action of their workmen, however, but under pressure from the body that inaugurated the strike in the first place.

In all about 1,800 men were idle for periods ranging from three to seven days. The wage loss was estimated at \$10,000.

FEBRUARY 28—Two hundred employes of the Balles Freres silk braid and ribbon mill made a demand for an increase in piece prices amounting to about 20 per cent. The strike which ensued lasted one week, and was settled on terms that the firm declares would have been granted on request in the first place.

MARCH 1—One hundred and thirty employes of the Woodbine Hat Co's plant at Woodbine went out on strike because a demand they had made for a reduction in working time without reduction of pay had been refused. The factory had been running ten hours per day, and the demand was that the time should be cut down to eight.

The operatives, both men and women, were almost all non-English speaking foreigners' and after a week's idleness most of them were reduced to a condition of extreme want. Twelve employes refused to join the strikers, and remained at work. These men were attacked by their old shopmates while passing from their homes to the factory, and many of them severely beaten. On March 9, after the strike had been running a little more than a week, the factory building was attacked by a riotous mob and considerable damage was done; stones were thrown at windows and some shots were fired by the mob and also by the workmen in the factory. The Mayor of the town appointed special constables to assist in keeping the peace and these, with some assistance from the Sheriff, were able to prevent any further outbreaks. The firm endeavored to obtain workmen from Philadelphia to take the places of the strikers, but were only partly successful. The strike continued until March 15, when it was ended by a compromise, which included an agreement to establish better sanitary conditions in the factory.

MARCH 4—The workmen in the Shoemaker mine, near Buttzville, demanded an increase of ten cents per day in wages, and threatened to strike

if it was refused. The firm thereupon discharged all who had joined in the movement and employed new men in their places.

MARCH 15—Eight girls, employed in the plant of the Crescent Belting and Packing Company, at Trenton, quit their places because the superintendent directed them to do certain work to which they objected. All were discharged, but on subsequent application were reemployed.

MARCH 16—A dispute which arose as to whether the stone cutters employed by the granite contractor, or the members of the Bricklayers and Masons Union, had the right under union rules to lay the granite portion of the new City Hall building at Trenton, was finally settled, after much discussion, in favor of the stone cutters.

MARCH 18—Twenty expert lace makers, employed in the works of H. S. Hall at Jersey City, quit work because of a refusal on the part of the firm to discharge three men in its employ who had for personal reasons resigned their membership in the lace maker's union, or else compel them to rejoin the organization. About 100 people were employed in the factory; the strikers were the only skilled workers employed, and the only members of the union.

The company secured the services of a number of experienced men to take the place of the strikers, but these, it was asserted by the strikers, were foreigners smuggled into the country in defiance of the Federal laws forbidding the importation of laborers under contract, and complaint was made to the Commissioner of Immigration, who ordered the arrest of eight employes, including one woman, and their removal to the Ellis Island immigrant depot pending an investigation of the charges. This took place on May 17, and the company in answer to the charges stated that all the new employes, including the eight who were arrested, had been in its employ at various times prior to the strike. At this writing the question of whether these workmen were entitled to remain in the country had not been settled.

APRIL 1—The union painters of Atlantic City went on strike on this date to enforce a demand made on the master painters for the new union wage scale, which is \$3.00 per day.

APRIL 9—Forty employes of the Hanover Brick Co., at Whippany, N. J., made a demand for higher wages and went on strike for the purpose of enforcing the same. The strike lasted seven days and had an unsuccessful termination. The wage loss was, as reported, \$750.

APRIL 10—Fifty employes of the South River Brick Co., at South River, quit work because the company refused their request for a 20 per cent. advance in wages. The strike lasted six days, and the men returned on a 10 per cent. increase over the wage rates of 1907. The wage loss was \$420.

APRIL 15—Fifty-six men and fifty-two women, employed in the broad silk mill of Israel R. Cohen, at Paterson, went on strike for higher wages

and recognition of their union, both of which demands were refused. The strike ended unsuccessfully on May 10th, three and one-half weeks after it began. The wage loss, as reported, was approximately \$4,000.

APRIL 16—One hundred and twenty-five laborers, employed in the Ostrander Fire Brick Works at Perth Amboy, struck for an increase in wages which would bring their pay up to \$1.50 a day, the prevailing rate in the other brick and clay plants of the vicinity. The firm refused the advance, and closed the plant for repairs, giving out at the time a statement that it would not be reopened for one and possibly two months.

APRIL 19—The laborers employed in the plant of the Perth Amboy Brick Co., about 100 in number, refused to go to work at the customary time on this date, and left the establishment in a body. While no formal demand was made, it was understood that these men, most of whom had been receiving thirteen cents, wanted a general wage scale of fifteen cents per hour and ten hours per day, the same as was at the time being paid in most other plants of similar character in the clay region. The company responded to the request by closing the works.

APRIL 20—The union bakers, employed in Passaic bakeries, struck for a twelve hour work day and recognition of the union, which was conceded in nine out of the thirteen shops involved; in the four that held out the non-union men employed were mobbed by the wives of the strikers whose places had been taken.

APRIL 26—The street and park laborers of Montclair demanded an increase of 25 cents per day in wages, and refused to work until the same was allowed. Their wages had been \$1.50 per day. The laborers pleaded in justification of their demand that the salaries of practically all public officers had been increased recently. The Superintendent of Roads, under whose jurisdiction the matter came, granted the increase and work was immediately resumed.

MAY 1—Fifteen inside wiring journeymen of the Perth Amboy branch of the International Brotherhood of Electrical Workers demanded an increase of 50 cents per day in their wages, and struck because the contractors would not agree to the same. Two contractors, employing five men, had agreed to the demand when made, and therefore continued at work. The contractors were willing to pay 25 cents more per day for the present year, with the understanding that after the expiration of that time an increase of the same amount would be allowed provided business conditions were then favorable. Wages in the trade had been \$3.00 per day, and the amount demanded was \$3.50. The strikers refused all offers of compromise, and threatened to appeal to the other local building trades unions for help in enforcing their demand. A conference between the Master Builders' Association and the electrical contractors resulted in a decision to pay the wages asked by the wiremen, as a continuance of the strike might result in tying

up all building operations in the city. The strike therefore ended on May 8th in a complete victory for the men. The wage loss was \$300.

MAY 3—Two hundred laborers employed by Contractor W. H. Gahagan, on the Lackawanna cut-off between Huntsville and Johnsonville, whose wages were \$1.40 per day, went on strike for an increase of 20 cents, which was refused. A large proportion of the men were not in sympathy with the demand and were only prevented from continuing at work by threats of violence on the part of the strikers. After one day's idleness work was resumed on the old wage scale by all but fifty-seven of the men, who were compelled by the Under Sheriff and his deputies to take a train at the nearest station and leave the country.

MAY 4—The hoisting engineers on the addition to the post office building at Trenton struck because the contractor refused to pay them for rainy days when outside work had to be suspended. The engineers' dissatisfaction arose from the fact that other workmen were given employment inside the building during inclement weather. An agreement was reached three days later under which they were allowed full pay.

MAY 5—Seventy-five union plumbers of Atlantic City went on strike because the employers refused to sign for another year the agreement as to wages and working hours that expired on May first. The reason advanced by the master plumbers for their refusal was that the union had not maintained its scale impartially, as in many instances which had come to their knowledge journeymen had worked for less than the standard \$4.00 per day, and done so with the sanction of the union.

MAY 25—One hundred and twenty-five laborers recently employed for work on the Pennsylvania Railroad road bed, between Monmouth Junction, N. J., and Tullytown, Pa., went on strike because the wages of older employes on the same work was 16 cents per hour, while they were being paid 14 cents. The company increased their wages two cents per hour, and all resumed work next day.

MAY 27—Members of the National Teamsters Association residing in Hudson County, N. J., rendered a very active and aggressive support to the New York branch of the same organization in its strike against the Hecker-Jones-Jewell Milling Co. The non-union drivers of the concern were frequently interfered with while passing through the streets of Jersey City and Hoboken, and a delegation of the local branch of the union waited on the Mayor of Jersey City and entered a protest against the measures taken by the Chief of Police for the protection of these men. A non-union driver was frightened into abandoning his truck on one of the streets by a number of strike sympathizers who followed him with threats from the ferry.

MAY 28—A committee of the Team Drivers Association of Trenton appeared before the Street Committee of the Common Council at the City Hall,

and entered a protest against the employment on the streets of cart owners not affiliated with their organization.

JUNE 2—Eight men employed in the black department of the Barber Asphalt Works at Perth Amboy, who were receiving 18 cents an hour, demanded 20 cents, and quit work because the increase was not granted immediately after it was made. The company at once filled their places with new men.

JUNE 9—Thirty Italian laborers employed at the Rumson club grounds went on strike because the contractors refused to pay them \$1.75 per day, which was an increase of 25 cents over the amount they had been receiving. Their places were filled as fast as other men could be procured.

JUNE 10—The painters, carpenters and other workmen employed on the Washington street, West Orange school, went on strike because the firm to which the contract for installing the heating apparatus had been given employed members of the International Steam Fitters Union, who it was claimed by the local unionists had no right to work in the Oranges. Work on the school building was brought to a complete standstill, and the strikers refused to permit its being resumed until the heating contractor discharged his own employes, and had taken on in their places members of another union called the United Association of Steam Fitters. This was finally done after several conferences and much delay.

JUNE 25—About thirty men employed in erecting the new water tower at the works of the United States Metals Refining Company, went on strike because the firm refused to pay the union wage rate of \$4.80 for an eight hour day. The workmen were all members of the Structural Iron Workers' Union.

JULY 1—One hundred and twenty-seven employes of the Ronalds and Johnson Co., manufacturers of plumbers' material at Hainsport, quit work on July 1 to enforce a demand they had made on the firm for a wage increase of 10 per cent., and returned to work on August 6, after having been idle thirty-six days, without having gained anything. Wage loss, approximately, \$7,000.

JULY 1—One hundred men employed in the Raritan Copper Works, at Perth Amboy, made a demand that their wages, which were fifteen cents per hour, should be advanced to seventeen and one-half cents, and struck because of its being refused. All returned to work on the old terms on July 10. The strike lasted ten days, and the wage loss was \$1,500.

JULY 1—Sixty men employed in the Edison Portland Cement Works, at New Village, quit work after a request which they made for higher wages had been refused. The men returned on the old terms after having been idle four working days.

JULY 3—Fifteen drivers for Adams Express Co., at Asbury Park, demanded an increase of \$5.00 per month in wages, which was agreed to by the management after one hour's suspension of work.

JULY 12—Twenty employes of the Monham-Magor Co., at Athenia, went on strike to enforce a demand for the reinstatement of an employe who had been discharged. The firm employed new men and the strikers lost their places permanently.

JULY 16—A strike of short duration, but one the particulars of which are of sufficient interest to justify their being stated with a moderate degree of fullness, occurred at the Lembeck & Betz Brewery, Jersey City, on the morning of July 16, and ended almost as soon as it was begun, in the complete surrender by the company of the point at issue.

The brewery is conducted as an exclusively union establishment, and has a contract signed by its officers and the authorized representatives of the International Union of Brewery workers, one provision of which is that all grievances or misunderstandings relating to duties, or privileges as between the company and its employes shall be submitted to arbitration for settlement before action of any other character is taken on the matter by either party. The case reported was that of a driver who had at one time been a member of the union, but was expelled because of some personal differences between himself and some of the representatives of that body. Immediately afterwards notice was served on the company that the man must be discharged, and its request for information as to the grounds on which he had been expelled were entirely ignored. Relying on the arbitration clause in its contract, no action was taken in the matter by the company until a peremptory demand was made that the man be immediately dismissed or the entire working force of the brewery would quit at once. To this, and to a further demand that the men be paid for the time during which work was suspended, the company was forced to agree.

JULY 20—Thirty-four hoisting engine tenders, employed by the Millard Construction Co., in the Erie Railroad cut at Jersey City, addressed a letter to their employers requesting that their wages, which were then thirty cents per hour, should be advanced to thirty-five; this was refused, and the men thereupon went out on strike, their action causing a practical suspension of work in the cut which continued for seven days, when the strikers abandoned their claim for an increase and sought employment elsewhere. The wage loss as reported by the company of those directly concerned in the strike was \$1,224.

JULY 21—Five drivers employed by the National Biscuit Co., in Jersey City, went on strike because the company refused to increase their wages, and also release them from the bond of \$500, which each are required to furnish. The strikers were being paid \$9 per week, and wanted \$12.

JULY 26—One hundred and sixty employes of the Summit Silk Co., at Summit, went on strike because the firm refused to reinstate at their de-

mand a workman who had been discharged for cause. After being idle two and one-half days, the demand was withdrawn and all returned to work. The wage loss as reported was \$730.

JULY 28—About two hundred men employed on the new Prudential Insurance Co's building at Newark quit work because six engineers belonging to a New York union not affiliated with the international organization, had been employed. The employment of these men was regarded by the unionists as a proclamation of the "open shop." The men who quit work were plumbers, steamfitters, electricians, bricklayers, carpenters and their respective helpers. The carpenters returned to work next day, but quit again later, on orders from their union, because the iron work contractors had declared their intention to proclaim the open shop, which policy they did in fact adopt on Monday, August 2. Following this action on the part of the iron work contractors, the iron workers union called off eighteen of its members who were then employed by him (the contractor) on the new telephone building on Washington street, but these were replaced by non-union men from New York, and work on the structure went on without interruption. Practically the same conditions existed on the Prudential building, where the strike originated. The contractor promptly filled the places of the strikers with men from New York and elsewhere, regardless of their relations to or standing with the local unions, and on or about August 30, the strike appears to have been entirely abandoned by the men who returned to work where vacancies were found with the tacit consent of their unions.

AUGUST 2—Twenty-five men employed by the American Lumber Co., at the foot of Duffield avenue, Jersey City, quit work because a foreman in the company's employ had resigned because of some fancied grievance. Their places were soon filled with other men.

AUGUST 11—Thirty men employed by the firm of Collins, Lavery & Co., at Jersey City, struck to enforce a demand they had made for an increase in wages, amounting to two cents an hour. The firm refused, and the men returned to work on August 30th, after ten days' idleness and a wage loss of \$500.

AUGUST 23—A gang of laborers—number not reported—working in the Pennsylvania Railroad tunnel at Weehawken, struck for an increase of 25 cents per day in their wages, and abandoning the demand, returned to work after about one hour's idleness.

AUGUST 25—About 100 men and 50 women, employed on the first floor of the Hilson Cigar Mfg. Co's factory on Livingston street, Elizabeth, went on strike because their foreman, whose request for an assistant, had been refused by the firm, had thereupon thrown up his place. The operatives in other departments of the factory took no part whatever in the strike, and on August 28, an agreement was reached under which all the strikers returned to work, and the foreman was reinstated, but without the assistant, the request for whom was the original cause of the trouble.

AUGUST 25—Six bakers, employed in the shop of Barney Flieschmann, on Fayette street, Perth Amboy, went on strike for recognition of union and because one of their number had been discharged. The vacant places were promptly filled with new men, who were attacked on the morning of the 29th by the strikers and a number of their friends. The police promptly interfered, and in the struggle that followed, one man—said to be a labor union organizer, was shot.

AUGUST 28—A large number of negroes, employed as laborers on the new municipal water plant at Haddonfield, went out on strike for more wages. Their places were promptly filled by Italians, and no delay was caused in the progress of the work.

AUGUST 28—Forty-five men employed in the shoe factory of Johnson & Murphy, Lincoln street, Newark, struck for an advance in wages. A compromise, satisfactory to both sides was effected, and the men returned to work on September 5; wage loss as reported, \$700.

SEPTEMBER 1—One hundred and forty-seven employes of the Summit Silk Mill, at Summit, went on strike for an increase of schedule prices for weaving, and after an idleness of eight days returned to work under a compromise agreement. The wage loss was \$2,184.

SEPTEMBER 11—Eighty employes of the Starr Spring Bed Co., on Branford street, Newark, went on strike for the purpose of forcing the firm to recognize the existence of their union. At the end of the month the strike was still in force.

SEPTEMBER 13—Twenty-five men employed by the Flemington Cut Glass Co., at Flemington, went on strike in sympathy with ten other employes of the firm who having quit work some days previous because of dissatisfaction with prices, had been refused reinstatement by the company after they had applied for the same.

SEPTEMBER 14—Union bricklayers, who were working on a new public school building at Millville, went on strike because some non-union men were employed on other work about the structure.

SEPTEMBER 21—Practically all the union carpenters of South River went out on strike, and refused to handle material furnished by lumber firms who refuse to sign an agreement not to sell to a non-union carpenter, or to contractors employing non-union men. The dealers agreed to deal with union men only for the future, and the strike was declared off.

SEPTEMBER 23—Forty members of Teamsters Local Union, No. 475, employed by the firm of Wilkinson-Gaddis & Co., at Newark, went on strike because of their demand for an increase of wages having been refused. The teamsters had been receiving \$12 per week and asked for \$15, which they said was the union rate. Their places were filled by new men.

SEPTEMBER 25—One hundred union men, employed on the new Court House, in Jersey City, quit work because the marble used on the building had been cut and polished by non-union workmen.

TABLE NO. SEVEN.

The table that follows is a summary of the essential facts relating to the strikes and lockouts recorded in the preceding text. The date when each strike occurred, the character of the business, location of the works, and the cause of the strike or object sought to be attained thereby. The total number of strikes (there were no lockouts) was ninety-three; the various causes for which they were undertaken and the number of each are shown on the following table in the order of their importance:

For increase of wages.....	45
To compel employers to discharge non-union men.....	23
To secure discharge of objectionable foremen	4
To reinstate discharged fellow workmen.....	4
Against reduction of wages.....	3
For recognition of union.....	2
Against discharge of union man.....	2
Quarrel between rival unions.....	2
Against piece-work	2
Pay for overtime on steam tugs, barges, etc.....	1
Against the employment of more help in dull times.....	1
Refusal of employers to sign annual agreement.....	1
Increase of wages and reduction of working hours.....	1
For a longer lunch hour.....	1
To prevent dealers selling to non-union contractors.....	1

INDUSTRIAL CHRONOLOGY.

TABLE No. 7.

Strikes and Lockouts, from October 1, 1908, to September 30, 1909.

When Strike or Lockout Occurred.	Business or Occupation in Which Strike or Lockout Occurred.	Location in Which Strike or Lockout Occurred.	Cause or Object of Strike or Lockout.
Oct. 1.....	Masons	Perth Amboy	To force discharge of objectionable foreman.
Oct. 1.....	Cigar makers	Newark	Against discharge of girl.
Oct. 6.....	Hoister runners	Jersey City	For an increase of wages.
Oct. 14.....	Coke makers	Camden	Force discharge of objectionable workmen.
Oct. 27.....	Laborers (road construction).....	Jersey City	Company served poor food.
Nov. 23.....	Clay and terra cotta workers.....	Perth Amboy	For an increase in wages.
Nov. 23.....	Clay and terra cotta workers.....	South River	For an increase in wages.
Nov. 23.....	Clay and terra cotta workers.....	Keasbey	For an increase in wages.
Nov. 28.....	Car repairers	Perth Amboy	Opposed to working "piece-work."
Dec. 8.....	Glassblowers	Millville	For removal of objectionable workman.
Dec. 9.....	Crews (tugs and lighters).....	Weehawken	Pay for overtime and two Sundays off a month.
Dec. 12.....	Shoe workers	Newark	Object to firm employing additional help during slack time.
Dec. 13.....	Caulkers	Weehawken	To force discharge of non-union men.
Dec. 16.....	Express drivers	Newark	For an increase in wages.
Dec. 23.....	Truck drivers	Jersey City	For reinstatement of discharged employee.
Dec. 24.....	Silk throwers	Paterson	For increase in wages.
Dec. 31.....	Iron workers	Newark	To force discharge of non-union men.
Jan. 1.....	Laborers (quarry)	Franklin Furnace	For increase in wages.
Jan. 4.....	Express drivers	Hoboken	For increase in wages.
Jan. 13.....	Laborers (road construction).....	Wharton	For increase in wages.
Jan. 15.....	Hat workers	Newark	For restoration of union label.
Jan. 15.....	Hat workers	Orange	For restoration of union label.
Jan. 21.....	Teamsters	Newark	For increase in wages.
Jan. 31.....	Silk workers	Paterson	For increase in wages.
Feb. 12.....	Sheet metal workers	Jersey City	To force discharge of non-union men.
Feb. 19.....	Clay workers	Maurer	For increase in wages.
Feb. 20.....	Laborers (definning)	Sewaren	To force discharge of objectionable foreman.
Feb. 23.....	Handkerchief workers	South River	For increase in wages.
Feb. 26.....	Clay workers	Woodbridge	For increase in wages.
Feb. 26.....	Miners (iron)	Buttville	For increase in wages.
Mar. 4.....	Silk workers	Hoboken	For increase in wages.
Mar. 8.....	Lace makers	Hoboken	Differences between members of union.
Mar. 18.....	Lace makers	Jersey City	

Mar.	30	Laborers	Paterson	Against a reduction of wages.
Apr.	2	Painters	Atlantic City	For increase in wages.
Apr.	9	Brick makers	Hanover	For increase in wages.
Apr.	10	Carpenters	Somerville	For increase in wages.
Apr.	10	Clay workers	South River	For increase in wages.
Apr.	15	Silk weavers	Paterson	For recognition of union.
Apr.	20	Clay workers	Perth Amboy	For increase in wages.
Apr.	26	Laborers (street)	Montclair	For increase in wages.
Apr.	26	Electrical workers	Perth Amboy	For increase in wages.
May	1	Laborers (road construction)	Newton	For increase in wages.
May	3	Engineers (holsting)	Trenton	Opposed to being "docked" for rainy days.
May	4	Plumbers	Atlantic City	Employers refusal to renew annual agreement.
May	6	Laborers (cellar digging)	Somerville	For increase in wages.
May	12	Laborers (construction)	Trenton	For increase in wages.
May	25	Laborers (construction)	Somerville	For increase in wages.
May	28	Heaters	Rockaway	For increase in wages.
May	3	Asphalt block makers	Perth Amboy	For increase in wages.
June	9	Laborers (unclassified)	Red Bank	For increase in wages.
June	10	Heater boys	Camden	Against a reduction in wages.
June	12	Carpenters	West Orange	For dismissal of objectionable workmen.
June	12	Painters	West Orange	For dismissal of objectionable workmen.
June	23	Laborers (sewer digging)	New Brunswick	To recover wages over due.
June	25	Iron workers	Roosevelt	Payment of union wages and six hours less per week.
July	1	Copper refiners	Perth Amboy	Increase in wages.
July	1	Cement workers	New Village	Increase in wages.
July	2	Foundry workers	Hainesport	Increase of 10 per cent. in wages.
July	2	Coarse workers	Newark	For increase in wages.
July	3	Drivers	Ashbury Park	For increase in wages.
July	7	Copper refiners	Jersey City	For increase in wages.
July	17	Brewery employees	Jersey City	For dismissal of non-union men.
July	21	Holsting engineers	Jersey City	For increase in wages.
July	22	Drivers	Torrey City	For increase in wages.
July	29	Engineers	Newark	For dismissal of non-union men.
July	29	Electricians	Newark	For dismissal of non-union men.
July	29	Bricklayers	Newark	For dismissal of non-union men.
July	29	Laborers (building construction)	Newark	For dismissal of non-union men.
July	29	Masons	Newark	For dismissal of non-union men.
July	29	Plumbers	Newark	For dismissal of non-union men.
July	29	Steamfitters	Newark	For dismissal of non-union men.
Aug.	2	Lumber workers	Jersey City	Against a reduction in wages.
Aug.	11	Box makers	Jersey City	For increase in wages.
Aug.	12	Iron workers	Newark	Against working with non-union men.
Aug.	12	Concrete mixers	Newark	Against working with non-union men.
Aug.	12	Masons	Newark	For increase in wages.
Aug.	23	Tunnel workers	Jersey City	For reinstatement of discharged foreman.
Aug.	25	Cigar workers	Elizabeth	For reinstatement of discharged employee.
Aug.	26	Bakers	Perth Amboy	For dismissal of non-union men.
Aug.	26	Iron workers	Newark	For dismissal of non-union men.
Aug.	27	Bricklayers	Newark	For dismissal of non-union men.
Aug.	27	Laborers (cellar digging)	Camden	For increase in wages.
Aug.	31	Laborers (road construction)	Paterson	For increase in wages.
Sept.	1	Silk weavers	Newark	For increase in wages.
Sept.	1	Silk lasters	Paterson	For increase in wages.
Sept.	2	Silk throwsters	Paterson	For increase in wages.

INDUSTRIAL CHRONOLOGY.

TABLE No. 7.—Continued.

Strikes and Lockouts, from October 1, 1908, to September 30, 1909.

When Strike or Lockout Occurred.	Business or Occupation in Which Strike or Lockout Occurred.	Location in Which Strike or Lockout Occurred.	Cause or Object of Strike or Lockout.
Sept. 7.....	Laborers (road construction).....	Westfield	Reinstatement of discharged employe.
Sept. 11.....	Bed makers	Newark	Recognition of union.
Sept. 14.....	Ericklayers	Millville	Against working with non-union men.
Sept. 14.....	Cut glass workers.....	Flemington	For increase in wages.
Sept. 16.....	Laborers (unclassified)	Bayonne	For a longer dinner hour.
Sept. 23.....	Drivers	Newark	Payment of union scale of wages.
Sept. 23.....	Marble setters	Jersey City	Opposed to working with non-union men.
Sept. 23.....	Carpenters	South River	Prohibit dealers selling to non-union contractors.

The Strike of Clay Workers.

The strike in the clayworking district of Middlesex county, which began on November 20th and ended on December 2nd, was remarkable because of the rapidity with which the movement started by a comparatively small body of men in one plant at South River, spread until practically all establishments in the same or related industries at Perth Amboy and its surrounding communities were suddenly transformed from their condition of normal tranquillity to one of violence, to cope with which required a considerable detachment of State troops, after the Sheriff of the county had made unavailing efforts to restore order. Practically all the original strikers were foreigners, as were also those employed in other plants who were subsequently induced to join them either through intimidation or persuasion.

The strike originated in a demand for an increase of wages made by the employes of the Great Eastern Clay Company at South River, who, apparently for the purpose of adding emphasis to their petition, quit work in a body immediately after it was presented, without waiting to hear what their employers might wish to say regarding the matter.

There had been a reduction of wages and working time throughout the district during the severe industrial depression following the money panic of 1907, when productive industry had generally fallen to about fifty per cent. of its volume previous to that disaster. To meet this situation many manufacturers closed their plants entirely; others reduced their working forces, discharged some—generally a considerable part of their ordinary working force—and many divided such work as there was to do among all their operatives, giving to each a fair chance to secure a share of such employment as they had to give. Only a very few instances came to light of reduction in wages, and the attitude of employers generally in this respect toward their—for the time being at least—defenceless employes, was, in its forbearance, exceedingly generous. Many establishments engaged in the production of standard goods of a not too bulky character continued to work without change in time or wages all through the period of depression and stored away their products against the time when normal trade activity would be resumed. Em-

ployers in the clay products industries were not less considerate in this respect than others, and in the arrangements made for tiding over the dull season were probably as fair and liberal as circumstances would allow.

Misunderstood propositions and assertions laid before workmen of the district, at political meetings, had created the impression among them that an advance in wages and a return of prosperity only awaited the election of that Presidential candidate on whose behalf these assurances were believed to have been given, and dissatisfaction of an intense kind spread among them when it was found that although the contest had resulted favorably to their wishes, the wage increase, which was expected to follow immediately after the election, had not materialized.

The impression that trickery of some kind had been practiced upon them seemed to have taken a particularly strong hold on the employes of the Great Eastern Company, and on November 20th, as before stated, two hundred and fifty of these men, all laborers, commenced the strike, which three days later had brought about a condition of intimidation, riot, and mob violence in the clay district that the civil authorities were for the time being powerless to control.

On the north side of the Raritan river the strike was begun by the 150 laborers employed in the brick yards near Keasbey, who, it is said, were receiving from \$1.25 to \$1.35 per day of nine hours; a demand made by these men for an increase was refused and they thereupon quit work in a body. The strikers visited the Raritan River Clay Works, where they were joined by 120 men, and from there the united body marched to every brick and fire proofing plant in the vicinity of Perth Amboy, South Amboy, Woodbridge and Maurer for the apparent purpose of closing them up and forcing the employes to join in a general strike. In this they were partly successful; seven plants were closed, and their employes, numbering approximately 1,275, quit work, some of them retiring to their homes to await the ending of the trouble, and others joining the somewhat riotously inclined crowds in the street. Many of those who quit work in these establishments, probably a majority of the total number, were actuated by fear that a refusal to do so would subject them to present violence at the hands of the mob, and also that which

they dreaded still more, the future hostility of their fellow workers of whom it was largely composed.

Although almost every plant in the district was visited by bands of strikers and their sympathizers, at least seventy-five per cent. of the total number escaped without any serious interruption of work, or disturbance of the ordinary routine of operation.

There were few instances of violence during the first and second days of the strike, the principal one being the attack on the office of the Standard plant of the National Fireproofing Company at Perth Amboy, during which it appears some few revolver shots were exchanged between the Sheriff's deputies on guard at the works and a few among the attacking party that carried fire arms; two men were reported to be slightly wounded in this encounter, and the office furniture and windows were damaged to some extent. Outside of this outbreak, which occurred on the morning of November 25, no overt acts were committed, but the marching bands in the streets and roads were growing in numbers and becoming more demonstrative; appearances indicated that control of the situation could not be long maintained by the civil authorities and aid was requested from the Governor, who, on November 25th, ordered Companies A, B, D, E, H and L of the 2d Regiment Infantry to the scene of disturbance. These troops, 384 in number, arrived at Perth Amboy on the evening of the same day; the influence of their presence was such that order and comparative tranquillity were at once re-established; the Sheriff's deputies on duty were recalled, and the various plants, now guarded by patrols of citizen soldiers, were relieved from the annoyance and possible danger of disturbance arising from large bodies of idle men hanging about their gates. Conditions in the entire district returned to the normal almost as rapidly as they had departed from it under the first excitement of the strike, and four days after their arrival on the scene of disturbance, four of the six companies were withdrawn by the military authorities, and the others followed two days later, so that on December 1st the citizen soldiers had all gone home and the civil authorities, municipal and county, were again in full control.

On the same date an agreement was reached under which five of the plants closed by the strike were reopened, and work re-

sumed by the old employes; the sixth followed on December 3rd; the Great Eastern Clay Company, whose employes commenced the strike, was reopened on November 27th.

The following table shows the plants involved in the strike, the number of hands employed, and the total wage loss in each of them on account of the strike.

COMPANIES.	Location.	Number of Employes on Strike.	When Strike Began.	When Strike Ended.	Wage Loss to Employes.
Great Eastern Clay Co.....	South River.....	250	Nov. 20....	Nov. 27....	\$1,400
National Fire Proofing Co...	Perth Amboy.....	300	Nov. 23....	Dec. 1....	2,880
National Fire Proofing Co...	Perth Amboy.....	150	Nov. 23....	Dec. 1....	1,440
National Fire Proofing Co...	Keasbey.....	175	Nov. 23....	Dec. 1....	1,680
Raritan River Clay Co.....	Ostrander.....	120	Nov. 23....	Dec. 1....	1,350
Ostrander Fire Brick Co....	Ostrander.....	150	Nov. 23....	Dec. 1....	1,525
Perth Amboy Fire Brick Co.	Perth Amboy.....	125	Nov. 23....	Dec. 3....	1,020

The total number of workmen involved in the strike was, as shown above, 1,270, and the wage loss suffered by them was \$11,290. Twenty-four men were refused re-employment, presumably because of having been more than ordinarily active in such excesses as took place during the strike. Eighteen of these men were employed in the Standard plant of the National Fire-proofing Company, and six by the Perth Amboy Fire Brick Company.

The strike was, as before stated, for an increase of wages, or more properly speaking, for an increase of one hour in working time per day, with a proportionate advance in pay so as to bring weekly earnings for laborers up to \$9 per week. As nearly as could be learned from conflicting statements, wages had been from \$1.35 to \$1.75 per day of nine hours throughout the district affected by the strike, and apparently the desire of those who took part in the movement was to increase the minimum to \$1.50 per day, they to give in return an extra hour's work, and a satisfactory settlement of the trouble was effected on that basis when the employers concerned agreed to run their plants ten hours per day beginning with April 1st.

To show how far the strike was from being general throughout the clay district, as many newspaper reports represented it to be at the time, it is only necessary to point out the fact that there are thirty-two plants in the territory covered by Perth Amboy, South Amboy, South River, Woodbridge, Maurer, Ostrander and Sayreville, in which an aggregate of 5,300 men are employed, while only seven plants, employing 1,270 men, were involved in the strike.

There seem to have been no labor unions among the workmen prior to the outbreak of the trouble, but immediately after it began, organizers from elsewhere made strenuous efforts to induce the dissatisfied men to form one, but without success, at least up to the time that tranquillity was restored.

The population of the district is largely made up of Poles, Hungarians, Slavs, Italians and Lithuanians, and as a matter of course, outside of a few Irish and Germans, who are generally in positions of some responsibility, these races supply the labor for all the clay working plants of the district. The Poles are the most numerous, and by all accounts the best workmen; their reputation for thrift seems to be borne out by the fact that a remarkably large proportion of them—thirty per cent. it was said—own their own homes. At South River they have built a very fine church, and also a parochial school in which their children are educated. The consensus of opinion among employers and old residents seems to be that these people are the most progressive of the foreign nationalities, taking a keen interest not only in their churches and schools, but also in the general affairs of the communities in which they reside.

A strong feeling of clannishness, born of a natural desire for some kind of social intercourse, has produced a separation of these foreigners into national groups, the members of which seek dwellings as near together as possible, so that in the several towns throughout the district there are "quarters," each populated exclusively by people of the nationality after which it is named.

This tendency, while productive of some present convenience and comfort to people who are strangers in a strange land, is yet for obvious reasons a very great detriment to their progress toward perfect assimilation with the native or English speaking population.

Wages are paid every two weeks as required by law, and in some of the plants there is a weekly pay day. The piece work system prevails very largely, and earnings, whether by day or piece, range from \$8.50 to \$10.50 per week. The neighborhoods in which they live are, generally speaking, very uninviting; chickens, geese and ducks, the property of the families, abound everywhere and roam at will about the premises of their owners. The homes are, with few exceptions, furnished with only the indispensable necessities of housekeeping, and almost all of them are without floor covering or window shades.

About fifty per cent. of the men have their families with them, and the number of children will average about four to a family. The unmarried men, almost without exception, board with their married fellow workmen of the same race. Their residences are mostly five or six room houses; the first floor as a rule is occupied by the family, the second being reserved for boarders. Two beds to a room seems to be the rule, and three occupants to one bed is not an uncommon arrangement. For this kind of lodging, together with the services of the housekeeper in cooking the lodgers' food, from \$2.00 to \$3.50 per month is charged.

The lodger buys his food according to his own fancy and has it prepared by the housekeeper, who in many instances renders similar services for upwards of twelve men in addition to her own family. The collective portions of meats or other foods belonging to the boarders are often cooked in the same pot or pan, and in their altered condition a sure identification of the property belonging to each of them is often provocative of disputes. Meat is indulged in not oftener than once a day, and the expenditure on this account is seldom more than six or seven cents. Equally frugal restrictions are observed in the consumption of other kinds of food, and as a result they are able, even with small earnings, to save a good deal of money. This, of course, is in a measure commendable, and would be absolutely so if it were not for the fact that in the judgment of many foremen and others who supervise their labor, lack of proper nourishment is a great drawback to the advancement of their value as laborers.

Many of the structures used as homes and boarding houses are in a condition of dilapidation and decay and have unsanitary surroundings which render them unfit for human occupancy.

These conditions are very noticeable at South River, where there are several company houses quite near the clay banks. The firms owning tenements are: The Ostrander Brick Co., Raritan River Clay Co., William L. Cutler, and the Great Eastern Clay Co. The first named of these concerns has six houses which rent for from \$10 to \$12 per month; The Raritan River Clay Company has five, renting for sums ranging from \$9 to \$12 per month. No information regarding the number of dwellings owned by the other companies or the rents charged for them could be obtained, but there is no reason for supposing them to be in any material degree less cheerless and uninviting than those referred to above.

About sixty per cent. of the workmen cannot speak English, and of the others, a large proportion have acquired barely enough of the language to establish some sort of an understanding between themselves and English speaking people with whom their daily experiences necessitate some sort of intercourse. The children, however, attend the public schools regularly, and are said by the teachers to be apt and enthusiastic students, equal in all respects to those of native birth.

The men are rather temperate in the use of intoxicants, and excepting on Sundays and holidays, when there is much feasting, seldom drink to excess. In the early years of their residence in the district the free use of strong drink was rather general among the men, but in this respect the habits of those longest here have undergone a marked change for the better; some of the uplifting influences of the public schools have been transmitted to the homes through the medium of the children with most gratifying results.

As a rule the foreigners and natives do not mingle freely together; in fact the old residents, both English and German speaking people, rather shun the newcomers because of their disagreeable habits and way of living. About this, however, the foreigners, who are intensely clannish themselves, appear to manifest no particular concern, as their idle time is spent, when not at home, in saloons or other resorts conducted by fellow countrymen.

The children, as before stated, are very desirous of learning; many of them are remarkably bright, and those who have been one or more years at school are particularly so. There is here little or no conflict between the factory and school for the pos-

session of the child, for the reason that work throughout the district, with scarcely an exception, is of a hard and rough character that can be performed only by strong men. Besides this, the compulsory provisions of the school laws are strictly enforced, and the truant officers pay particularly close attention to the children of foreign parentage.

During the progress of the strike, efforts were made by clergymen, merchants and public officials of the municipalities affected, to bring both sides together on the basis of arbitration of their differences, and although no formal action or agreement to that end followed immediately, there is no doubt whatever as to the final termination of the strike having been largely influenced by the kind and public spirited exertions of these men.

The National Fire Proofing Company was the only plant in the district in which strike breakers were employed. One hundred and fifty men of various nationalities were brought there from New York, but after one day's trial, all of them that had not already deserted to the strikers were promptly sent back again.

So far as could be learned, none of the firms in the district asked for military protection, but the Sheriff's action in bringing in the troops, in the face of conditions fraught with possibilities of the gravest danger to law and order, was applauded by all as a precautionary measure fully justified by the threatening character of the situation.

The understanding on which work was resumed, although not reduced to a formal agreement, has been faithfully observed by both sides. The men resumed work cheerfully when the plants were reopened, and their employers, who received them without any appearance of resentment on account of the occurrences of the preceding week, and in accordance with their promise, wages and working hours were increased on April first.

During the progress of the strike misstatements were frequently made regarding the existence of company stores in the district in which the workmen and their families were compelled to trade under penalty of discharge if they failed to do so, and that furthermore very extravagant prices were charged in these establishments for very inferior goods. As a matter of fact, however, the only store owned by a clay working or any other manufacturing concern in the entire region is located at Sayre-

ville, a place entirely outside of the zone of disturbance, and it is but fair to say that none of the features usually regarded as characteristic of company stores have a place in the management of this establishment. Started originally for the benefit of employes of the Sayre & Fisher Company, for the purpose of insuring the best quality of supplies at the lowest possible prices, there has been no departure from that policy. Wages are paid there as elsewhere in the clay region, at least every two weeks, and employes spend their money where and how they please, without pressure of any kind from their employers. The store, one of the largest in the town, sells to all classes of people, and has built up a very large business by following strictly upright methods.

The Hatters' Strike.

The longest strike on record for the hat industry in New Jersey, and one of the most protracted contests between employers and employes that has ever occurred in this State was begun on January 15th, 1909, when, in obedience to the orders of their officers, the workmen employed in all but a few of the hat factories located in Newark, the Oranges and Belleville quit work. The reason for their taking this step was that the Associated Hat Manufacturers, whose members owned and controlled sixty-two plants—mostly large ones—had ordered the use of the hatters' label to be discontinued in all its shops on that date. These factories are divided between Connecticut, Massachusetts, New York, New Jersey and Pennsylvania, so that the general cessation of work ordered by the National authorities of the "United Hatters of North America" brought about for a time a condition of almost absolute idleness among them all, and in the States named above threw a number of men, variously estimated at from 15,000 to 25,000, out of work, in which condition, so far as a return to their old employment was concerned, all but a comparatively few of them remained for almost a year. A large number of these men secured other, but probably less remunerative employment in various occupations that were not closed to them by union rules; the entire period covered by the strike was, however, so dull in all lines of industry that casual employment was far from plentiful, and it is quite probable that no work whatever was done by a majority of those who left the factories

in obedience to strike orders, until, with the sanction of the union, they returned to them again.

The number of wage earners involved in the strike in New Jersey was about 4,000, and all but eleven of the hat factories in the State—four at the Oranges, and seven at Newark or Belleville, were affected. These eleven plants were not concerned in the strike because the firms owning them were not connected in any way with the Associated Hat Manufacturers, against which body and its individual members all the disciplinary powers of the union were directed.

Efforts were made by the Bureau to obtain from both sides statements relating to the strike, its origin, numbers involved, with other particulars necessary for placing the matter in contention between themselves and their employes before the public in understandable form.

With this end in view a letter was addressed to all hat manufacturers in the State, asking for their version of the trouble; another to the same purport was sent to the National President of the United Hatters of North America, requesting a statement of the issues involved which would fairly reflect the view point of the hatters organization. Replies were received from a majority of the manufacturers, each of whom submitted details covering their own individual experience with the union and the extent to which their business operations were affected by the strike. Several of them submitted printed copies of an address issued by the Associated Hat Manufacturers to their employes setting forth reasons in justification of their order to discontinue the use of the hatters' label on goods produced in shops owned by members of the association. No reply whatever was received from the President of the Union, although later on a second letter was addressed to him on the same subject. It is, therefore, impossible to carry out the plan as at first projected, of presenting both versions of the situation out of which the strike developed, and only the statement of the case as submitted to their employes by the Associated Hat Manufacturers can be given. The address is prefaced by extracts from the contracts or agreements between the general officers of the United Hatters of North America and the Associated Hat Manufacturers, which were in operation at the time of the strike. The extracts are as follows:

"We, the General Executive Board of the U. H. of N. A., do hereby agree that in the future when trouble exists between the Manufacturers who are members of the Manufacturers' Association and their employes who are members of the U. H. of N. A., that the label will not be removed until due notice is given the National Officers of the Manufacturers' Association. Ten days to be considered due notice."

"In case of any disagreement between an employer and his employes which they cannot settle, it shall be submitted to arbitrators consisting of an equal number of manufacturers and journeymen to be selected in such manner as each association may direct. In case such arbitrators cannot agree, those appointed by each party shall severally choose an outside party and the two so chosen shall select a third, and their decision shall be final and binding, but there shall be no stoppage of work in any department, under any circumstances, until a final decision of the Board of Arbitrators has been rendered."

The full text of the manufacturers' statement follows:

"To our employes:

"In June, 1908, the Guyer Hat Company opened a factory in Philadelphia, and made a bill of prices with a committee of their employes, which was in all respects regular and legal, as it was signed by four men of the shop's crew and in the presence of the local officers of the finishers' association. The wage schedule was substantially as paid in all the other Philadelphia factories.

"In July of the same year, a schedule of prices was made by arbitration for the Guyer Hat Company for hats made in Boston. The words "In Boston" were used purposely, so as not to confuse the two factories, for at the time the Boston bill was made the Guyer Hat Company was operating in Philadelphia, though it was known in both cities that it was the ultimate intention of the Guyer Company to concentrate their business in Philadelphia.

"J. P. Maher, National Treasurer; Charles Morris, a National Director for Boston, and John Scully, a National Director for Norwalk, who were conversant with all the facts in the case, were the arbitrators for the Boston journeymen, and made the settlement at which time the phrase "In Boston" was fully discussed, and it was absolutely understood that the arbitrated bill applied to the hats made in Boston.

"Copies of all bills of prices are on file in the National office of the union.

"As two wage schedules were made, it of course follows that such hats as were made in Boston were to cost the amounts specified in the Boston schedule and those made in Philadelphia were to cost the amount specified in the Philadelphia schedule.

"The agreement made by the union with the Manufacturers' Association plainly reads that the label will not be taken out of the factories of any of our members without ten days' notice to us, and the Guyer Hat Company has been, and still is, a member in good standing in our Association.

"Our Association received no notice whatever of the intention of the officers of the union to take the label from the Guyer Co., this certainly was a distinct and absolute violation of the signed trade agreement, which should have been held sacred.

"Public statement by the officers of the union that they did not take the label away from the new Guyer factory (because the new Guyer factory never had it) is so foolish on the face of it, that a reply seems unnecessary. Certainly the factory building itself never used the union label, nor is it reasonable for the union label to go with the building, but it certainly does go with the Guyer Hat Company, as an organization which had always used it on the merchandize they produced.

"Even if such a ridiculous contention would hold, as a label belonging to a factory building, it is an absolute fact that hats were produced in the new Guyer Hat factory by union labor, under the Philadelphia wage schedule, and union labels were placed in the hats by the people working thereon.

"The claim that men worked by mistake does not alter the situation, for if claiming a mistake would absolve one from wrongs committed, we would have no need for policemen and courts.

"Whatever may have been the right or wrong of the above case, it was a dispute and it could and should have been arbitrated as agreed.

"In our efforts to have the questions in dispute settled peaceably and by arbitration, in the manner agreed upon, and distinctly so stated in your by-laws, it was officially suggested to your officers on January the 9th that they place the label and the men, whom they called out from the Guyer Co., back again, and that they then immediately notify us of their intention to take the label out after the time agreed upon as being considered due notice.

"A further committee met by appointment your National officers on Thursday, January the 14th, at 10 A. M., and made additional efforts to the same end. On the same day at about 1 P. M., and after the resolution had been passed, your officers were again requested to put the label and the men back in the Guyer factory, in which case the resolution passed would not become operative. This and all other proposals, looking toward an arbitrated settlement, were scornfully refused.

"At a joint meeting of the executive officers of both associations, held December 28th, called for the purpose of discussing the breaking of the agreements, your officers made the remark that 'the fight was coming sooner or later, and it might as well come now.' Thus is shown conclusively the extreme arrogance of your leaders and their lack of conciliatory spirit.

"From December 22d until January 14th the factory of Guyer & Company was closed, during the whole of which time we made continuous efforts to restore working conditions and to leave any matter in dispute to arbitration.

"You can judge by the statement of one of the National officers, who calls this a 'lockout,' of the truth of the many other statements made, for every union man knows that he was called out by his officers, which was another violation of the agreements, and also that there was no question of wages, hours of labor, arbitration, or anything else, but the simple one

of the manufacturers discontinuing the use of the label, which we have been told, time and time again, was optional with each manufacturer and is evidenced by the fact that they have allowed, and are still allowing, a union factory to run without the use of the label in question.

"The Guyer case being merely one of repeated violations of the letter and spirit of the agreements entered into, forced upon us the belief that it was the purpose of your organization to disregard these contracts. It was, therefore, decided that on February 9th, 1909, each member of our Association offer situations to operatives as individuals.

"ASSOCIATED HAT MANUFACTURERS."

Following this statement came a reply from the executive committee of the United Hatters denying the correctness of the version of the trouble presented by the Associated Hat Manufacturers, and reaffirming the strict correctness of their action in the matter of ordering the strike. The main points in the denial were that the Guyer factory, at Philadelphia, covered by the arbitrated schedule of prices, employed only five or six men who were transferred to the plant employing three hundred and fifty men that had been moved to that city from Boston. The position taken by the union officials was that the contract made with the smaller group of workmen could not be interpreted as being capable of extension to the larger one. It was moreover asserted that no copy of the bill of prices said to have been made for the Philadelphia factory and signed by a committee of its employes had ever been filed in the National office of the union. The reply also takes the ground that the schedule of prices fixed for the Boston factory of the Guyer Company should have remained unchanged until the expiration of the time for which the contract was made, no matter in what city the factory might be located. On this issue alone, the strike—one of the longest that has ever occurred in this State—has been carried on from the time of its commencement, January 15th, 1908, to the date of this writing, November 15th, 1909. No question of wages, working hours, or in fact anything else whatever was at any time involved in the struggle between the manufacturers' association and its employes. The contest, so far as information relating to the subject is obtainable, appears to be over the question of whether the rights and privileges, such as these may be, that go with the union label are attached to the company entitled under contract to its use, or to the factory building which it occupies.

Early in February the officials of the hatters' organization began the payment of strike benefits on the basis of \$7 per week to married men, \$5 per week to single men and \$3 per week to women and learners. These amounts were paid with only one or two weeks intermission, when the funds of the local organization becoming exhausted, the various organized trades of Essex county came to the assistance of the hatters with liberal and continuous contributions sufficient to continue payments on the scale as first arranged. These resources for the continuance of the strike were powerfully supplemented by the action of the general officers of the American Federation of Labor, who, in response to the hatters' appeal for financial assistance, ordered an assessment of ten cents per month on all members of unions affiliated with that body, the proceeds of which were to be paid over as received to the National Executive Board of the hatters for the support of its members on strike in New Jersey, New York, Connecticut and Pennsylvania. This levy was expected to produce a monthly fund of approximately \$175,000. Whether it did so or not, the hatters union were able thereafter to continue the payment of strike benefits without interruption.

Generally speaking, the progress of the long strike, so far as Newark and the Orange Valley were concerned, was unmarked by violence of a serious character. Coincident with the opening of the shops with non-union labor, there were a few attempts to obstruct the passage of bodies of strike breakers from the railroad stations to the factories; pickets were stationed around the works, and some very annoying attention was bestowed upon operatives in going to and from their work. So serious did this phase of the strike become that on April 6th, one of the largest manufacturing firms in Orange applied to the Court of Chancery for an injunction restraining the local union of the hatters and all its individual members from picketing its works, molesting its employes, or interfering in any way with its business.

In answering this application, the union, through its representatives, entered a denial of all responsibility for the violence charged, either in the case of strike breakers or the present employes of the petitioning company. The injunction was, however, granted.

On March 14th application was made to the United States Circuit Court of the District of New Jersey by the President of

the Associated Hat Manufacturers for an injunction restraining the officers and members of all local unions of hatters from interfering with, or attempting to coerce workmen employed in the fifty-eight factories of the Associated Hat Manufacturers, many of which are situated in Newark and Orange. The complainant also asked that the unions be estopped from taking their union membership cards from workmen because of their refusing to go out on sympathetic strikes. The Court granted a rule to show cause why an injunction should not issue. The proceedings were adjourned by the Court on the day set down for a hearing on the rule to permit the complainants to correct errors which appeared in the certification of affidavits, and on May 28th, a decision was handed down by the presiding judge, in which the demurrer previously entered by the defendant, was sustained and the case dismissed.

Almost from the very beginning of the strike disinterested persons have worked zealously to find a common ground on which the varying interests might be brought together and the wasteful struggle ended, with but slight results so far as the New Jersey factories were concerned. In Connecticut, however, the work of pacification was more successful, and early in June a compromise agreement was reached between the General Executive Board of the United Hatters and the owners of seventeen out of the twenty-one factories on strike in Danbury and other Connecticut towns, under which work was resumed in these plants.

At an early stage of the trouble and throughout its continuance, whenever conditions seemed to favor the success of arbitration, the Governor of New Jersey used his personal and official influence to bring it about. Associations of clergymen and citizens of Newark and Orange were formed for the same purpose; public officials of the municipalities affected by the strike, and humanitarian organizations of both men and women, who were aware of the trouble which invariably falls on the families of workmen from long continued idleness, also worked earnestly to the same end.

So all-prevailing was public interest in the strike and the desire to bring it to an end as speedily as possible, that the Essex County Grand Jury, early in July, appointed a committee of its members who tendered their services as mediators to both sides:

the committee, however, found the manufacturers still determined to exclude the label and run their plants on the open shop plan, while the officers of the union showed equal determination to insist on the restoration of the label as a condition precedent to the resumption of work and termination of the strike. Both sides finally agreed to a proposition submitted by the committee of the Grand Jury, which was in effect that an absolutely secret ballot should be taken among the entire body of strikers which show their real sentiments on the question of returning to work without the label, or continuing the strike until the manufacturers agree to resume its use. The balloting took place simultaneously in a large hall at 66 South Orange avenue, Newark, and in the Orange Armory, at Orange. Representatives of the union, the manufacturers and volunteer committees of public men, with members of the Grand Jury Committee, were present in both places to watch the balloting and insure its secrecy. The result of the balloting, which was strictly secret, showed that out of a total of 3,394 votes cast, 3,385 were opposed to returning to work without the label, and only 9 were in favor of ending the strike on the manufacturers' terms. The outcome showed both sides clinging with equal tenacity to their original position, as after the result of the vote was announced most of the largest firms declared their continued firmness in the determination to maintain the open shop system and keep out the label.

The next movement for ending the strike was inaugurated by Governor Fort, who, on August 14th, invited the National officers of the hatters' organization, with representatives of the local unions and several of the manufacturers to meet him in conference on the situation at the State cottage, Sea Girt. A tentative basis of settlement was developed by the discussion which took place, and the conference closed hopeful that its suggestions of mutual concessions would be looked on with favor by both sides. By authority of the conference a written agreement was prepared embodying the Governor's suggestions, which was to be submitted for approval to the hat manufacturers of Orange and Newark, and to the officers of the striking union men. As the agreement provided for the retention of the label, union sentiment was quite favorable to its adoption, but the Associated Manufacturers refused to change their attitude, and so for the time being nothing came of the conference. That this

latest effort to bring about a general pacification was not entirely fruitless became apparent when in the early part of September two or three of the largest firms in the trade, having factories in both Newark and Orange, opened negotiations with the union officials with a view to securing some modification of the terms offered on behalf of the journeymen after the Governor's conference. The stipulation that appeared most objectionable was that which required the discharge of all non-union workmen employed since the commencement of the strike, including such former members as had been expelled from the union for refusing to quit work when the strike was called. It was said that the manufacturers insisted on all these men being taken into the union, and that arrangements to that effect should be embodied in the negotiations for a final settlement. How far this generous desire to protect the non-union men was successful cannot at this writing be determined, but that it was not entirely so seems apparent from the fact that the firms engaged in the negotiations began, as these took on definite form, to lay off numbers of their non-union employes.

On October 18th articles of agreement between the Hatters' Union and the firm of E. V. Connett & Company, of Orange and Newark, were signed by all parties concerned in the office of Judge Thos. A. Davis, at Orange, and so far as that firm and its upwards of 1,000 employes were concerned, the strike of nine months duration was brought to a satisfactory close.

The agreement was, of course, a compromise under which each side had to recede a little from the position it had taken at the beginning of the strike. The union is recognized, and the label will be placed in all hats where the order calls for them, and also in all hats where no mention is made of the label by the purchaser. If the purchaser does not want the label in the hat it will not be placed there. The bill of prices is to remain in effect for three years, and then be rearranged if desired. Other satisfactory and lasting settlements of questions that had been for years possible sources of trouble were embodied in the agreement. The so-called "stint law," under which it was customary for foremen in shops to hand the "weigh outs" or materials for work to the employes evenly is abolished. Under this custom all workmen received the same allotment, and as a consequence the

faster men had to stand around in idleness until the slowest had finished his task. This enforced idleness of the most expert workmen during a considerable portion of the working time has always been, during the busy season, a serious financial loss both to himself and his employer; hereafter every employe will have the privilege of working to his full capacity.

Foremen have the right to discharge for cause without question by unions or shop crews. No shop calls are allowed during working hours, and shop rules must be made by agreement with the employers: these rules must be in writing and not in conflict with the constitution and by-laws of the Hatters and the Trimmers' local unions. All opposition by the unions to the use of labor saving machinery is withdrawn.

To guard against the possibility of future trouble between the firm and its employes, the following very comprehensive arbitration clause was added to the agreement:

"A board of arbitration, permanent in character, consisting of three persons; one to be named by the employers, one by the hatters union, and one by the present Governor of the State, shall be established to settle all controversies between employer and employe which fail of adjustment in the factories. There shall be no stoppage of work or discharge of men pending arbitration. All vacancies in the position of third arbitrator, subsequent to the first appointment, shall be filled by the judges of the Court of Common Pleas of Essex county.

"All disputes submitted to the board of arbitration shall be decided within thirty days after such submission, and their decision shall be binding upon employer and employe. The terms of the arbitrators shall be five years from the date of appointment, and the expenses of the board shall be borne equally by the hatters organization and the manufacturers. In case the individual interests of any arbitrator are affected by the controversy before the board, the side whose representative he is shall appoint another arbitrator to act in that particular case."

Work was resumed at both the Connett Company's plants on Monday, October 18th. The former union men who had remained in the company's employ throughout the strike were kept in their places and reinstated in the union, and a certain number of the new hands were taken into the organization and also retained at work. All former employes, both journeymen and foremen, are invited to return, and the places of those who during the strike had sought and obtained employment in distant cities, will be kept open for a reasonable time, awaiting their return.

The partial settlement of the long-continued strike was welcomed with sincere demonstrations of approval by the hatters and their families and also the people of Newark and Orange. On all sides the hope was expressed that the course taken by the Connett Company and its employes for the settlement of their troubles would soon be followed by others, thus restoring peace and prosperity to the hatting industry and the thousands of people to whom the long-continued suspension of work had caused much suffering.

These expectations were to some extent justified by the fact that one or two other plants resumed work under agreements practically the same as that of the Connett Company, and although at this time (October 31), the strike is still on, hopes are entertained throughout the district that a complete pacification will soon be effected on substantially the same terms.

The unanimity with which the order to strike in the first place was obeyed, and the fact that during the progress of the long struggle so very few of the workmen returned until ordered to do so by their officers, is a remarkable demonstration of the power of the union over its members.

One firm employing 700 operatives when the strike began reports on October 20th, that only twenty-five of these were then at work. Another reports that about 300 men and 60 women were employed when the strike began, and of these only five of each sex were then in its employ on the same date. The proportion of old employes reported by other firms as having returned at one or another time during the progress of the strike was equally small.

Ten factories in Newark and seven in Orange, employing between them approximately four thousand two hundred men, were involved in the strike, and of this number, as indicated by reports to the Bureau, about twenty-eight hundred were still idle on October 31st.

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